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Technology in the Restaurant Industry

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Walking into a restaurant ten years into the future, you may experience utter silence. You will most likely approach a kiosk, put in your order, swipe a card or tap a card, and wait patiently for your order without having said a single word to a person in the building. Off you go, lunch in hand, back to your busy life with a bag full of food to get you through the day. Or perhaps you go to a drive through, scan your phone, have someone hand you your food, and drive away - only because you pre-ordered everything and paid for it twenty minutes ago. With the ever-expanding capabilities of technology, there is no limit to where the restaurant industry can go.

Every year, nearly a trillion dollars is invested into the food service industry. Falling under the umbrella of hospitality, this is the business of providing service experiences to consumers around the world. In light of the current health crisis, people all over the world are looking for safer and more efficient ways to dine. Not to mention timely dining experiences, as it seems people are only looking for ways to move faster in their everyday lives. Technology enables productivity to be at an all time high. There is no one size fits all for this industry, as some establishments revolve their brand integrity around pristine customer service through human interaction, but who is to say that such technology would not enhance the world of fast casual dining?

This review will build upon this concept of technology acceptance and adoption in the fast casual dining space. The current problem in this industry is that the capability of technology is outpacing what is actually being utilized. The integration is still in a very early phase. This is limiting the industry as a whole, which leads me to my research question. How will the presence of technology in the fast casual dining industry enhance the experience of consumers in the United States?

Review of Literature

There are a few themes circulating in the existing literature that stand out. This includes the rise of fast casual restaurants, the acceptance and usage of technology, and the opportunities and limitations in the fast casual sector. There is ample opportunity for future research, as well as some limitation to the existing literature. Nonetheless, this is an exciting, yet turbulent time for an industry that is evolving everyday. Fully expressing the challenges and details that make up each establishment would be impossible, so the bias of this research is that it can be generalized to describe this type of restaurant as a whole.

The Rise of Fast Casual Dining

The addition of fast casual dining in the United States brings opportunity. The value proposition in fast casual dining is immeasurable, as it allows consumers to enjoy a meal that may be healthy and nutritious, but at a much faster pace than the average sit down, full-service restaurant. Places such as Chipotle, Panera Bread, Boston Market, and Au Bon Pain are offering award-winning food at a reasonable price, with a chance to sit down in a pleasant surrounding (Tillotson, 2003). Year over year, the fast casual dining sales have steadily increased, and have even surpassed the growth of full service restaurants (Line & Hanks, 2020). While sales increase in fast casual restaurants, there is still the concern of the consumer's attachment and loyalty to these establishments, as less time is spent connecting with their surroundings. Studies suggest that consumers go to full service restaurants for an experience, while they may have a meal at a fast casual establishment more for convenience and companionship (Line & Hanks, 2020). In other words, it may not be problematic that they aren't connecting as well with the environment, because that is simply not the need they're looking to fulfill in dining in a fast casual restaurant.

Outside of the connection to environment, the emphasis on human touch is slowly fading in this industry. Automation and technology are mostly to blame, but consumers are responding

to this change in a positive way. Not only is this increasing the efficiency of orders and turnover, but it also is largely cutting labor costs for restaurants (Solnet et. al, 2019). In this instance, the restaurant can bring in more money with higher table turnover, and pay less in labor, leaving room to invest more in improving other aspects of the business such as service scape, growth, quality, and marketing. While this can be positive, it also takes away the most sought after competent of the hospitality industry, which is the ability to touch humans through their emotions and experiences (Solnet et. al, 2019). An industry that was once built on kindness and interaction may start to look and feel a lot different to the average consumer.

There is ample room to further research on the rise of this new sector of dining. New fast casual establishments are popping up each day. Much of this literature was published prior to the global pandemic, and this undeniably will influence the relationship consumers have with dining out. It is hard to predict whether it will enhance the attractiveness of dining in a fast casual setting, as such places offer more sanitary ways of dining (less human interaction and less time spent in the restaurant), as well as more affordable options. On the other hand, it could bring to light the value of sharing experiences with loved ones and slowing down. I propose an area to expand on the research is whether or not consumers strive to have both experiences with dining - fast casual and full service. Do fast casual establishments replace full service? Or do they simply serve a different purpose and fulfill a different need? Understanding the consumer's attitudes and beliefs is essential in positioning this industry going forward.

The Acceptance and Usage of Technology

With most changes in the industry, there will be resistance in the early phases. This is an industry that has been around for hundreds of years and has many deeply rooted traditions and customs. People form attachments to their experiences and memories in their favorite dining

places. Technology can be seen as a threat to these emotional attachments. Biometric systems,

also known as automatic technology, may be promising for this industry. Given that the industry

is driven by human interaction, this technology may start to mirror human behavior by using

algorithms to predict human behavior (Morosan, 2011).

  The Technology Acceptance Model (TAM) is one way to measure the progress of this

addition to the industry. This is a very well utilized framework, but is newly being utilized in the

restaurant industry (Forsythe & Kim, 2008). The TAM explains user's intentions to use

technology, as well as their attitude towards it, which are influenced by the usefulness and ease

of use (Morosan, 2011). There are limitations to this model, but it is one way researchers are

measuring these new developments with technology in the industry.

  The integration of technology not only affects consumers, but the restaurant staff as well.

Therefore, technology must be accepted and be properly utilized in order to be effective. If

customer satisfaction is closely connected to customer loyalty (Han & Rhu, 2009), then it is

important that the technology in these establishments is easy to use, and doesn't detract the

customer from returning to the restaurant, or challenge the employee enough to make mistakes

with the service. The opportunity here, and the necessity, is further education for employees. One

of the unique qualities of this industry is that people of all ages and skill levels work in these

establishments. The technology has to be usable by all skill levels and experience levels.

  It is difficult to obtain data on what percentage of fast casual restaurants in the United

States accepted or utilized technology. Much of the existing data is not representative of the

United States as a whole. This was limiting, as well as the lack of standardization for technology

usage, which can be attributed to the complexity of this industry. Each establishment has

different needs. For example, a Panera Bread located in a large metropolitan city may have

different technological needs than that of a restaurant in the suburbs. That being said, technology

is being introduced in phases, based on the needs of each particular location.

Opportunities and Limitations of Technology Integration

The new trend in our current industrial revolution is embedding smart technology in all

applications. Technology is aiming to fill the gap between the physical being and mobile

engagement (Mercan et. al, 2020). Without a balance, the industry will change entirely.

According to Solnet et. al (2019), "the dilemma for hospitality organizations is to find the

optimal balance between meeting customer expectations for human touch (relational) with their

desire for speed, price, and efficiency (transactional) that technology offers." (p. 393). How can

restaurants deliver on quality, fair pricing, and efficiency without depriving their customer base

of the connection that they hope for in their experience?

Opportunities

One of the few restaurants that has built a bridge between automation and human

connection is Panera Bread. They don't exclusively provide one or the other, but a combination

of the two. They found that in adopting new automation technology that their employee demand

went up. More orders meant more kitchen staff, more turnover meant more tables to clean, and

more volume meant increased demand for quality control (Dunn, 2017). The same was true with

McDonald's after implementing the same type of technology. In the early phases of automation,

staff had to be there to ensure things went off without a hitch.

When automation is used to describe technology it is typically describing self-service

technology. SST is already implemented in some full service restaurants, such a Chili's and

Applebees, but could be utilized more. This kind of technology is essentially a service provided

to customers that allows them to go through the dining process without any contact with

employees (Park et al, 2020). Technology can also help to minimize any mistakes made with orders and communication (Huber et. al, 2010). Technology promises more accuracy and control over the ordering process. In addition, the flow of orders that comes in from digital orders is far greater than those before SST, especially in stores like Starbucks, Burger King, and Pizza Hut, leading to higher sales volumes (Dunn, 2017).

Limitations

If all of this great technology is available, why can't you find it in every fast casual restaurant? Technology and hospitality don't necessarily go hand in hand. The hospitality industry is founded on connectivity and human interaction, which technology will replace with more efficient ways of doing things. Being in the customer service industry, customer satisfaction is of the utmost importance if you want to develop customer loyalty. Han & Ryu (2009) found that customer satisfaction is mostly dependent on physical surroundings and price perception. With kiosk systems and mobile ordering, the customer spends less time interacting with their surroundings. Price perception is less of concern with fast casual dining, as the benefit of dining in these establishments is getting more affordable food that is good quality. Technology offers an efficient, cost effective service that people strive for in a fast casual restaurant, but what is missing is the experience interacting with employees, connecting to the physical environment, and that personal touch that smart technology simply can't provide.

The limitations of technology in the restaurant industry are strongly pointed towards the removal of human connection. However, that puts into question the purpose behind dining in a fast casual restaurant versus a full service. A fast casual restaurant may not fill the needs of customer's looking for a personalized experience, but it is fast and efficient, and delivers quality at a fair price. A fast casual restaurant can't replace the full service offering, but rather, fulfill a

different need. Technology does not ensure that there will no longer be a need for full service establishments, but rather, ensure that the existing fast casual establishments can deliver on their promise of fast, efficient, quality food at a fair price. Technology puts the consumer in charge, and provides a timely option for dining.

Methodology

Sample and Data Collection

My proposed sample and data collection method is surveying for both qualitative and quantitative data. Surveying fast casual dining restaurants around the country with expert sampling ensures that a large sample size is being collected. This digital survey would be sent directly to management and be a combination of both data driven and open ended questions. To ensure that the survey is relevant to the current climate of the industry, it would mostly include questions about the impact of the global pandemic and how this has impacted technology usage and acceptance. This industry will be forced to evolve as a result of the health crisis, and therefore, the relationship with technology and the need for it will change too.

Future Research

Outside of the identified future research topics that are included in the literature review, there is one major theme underlying in this industry. As technology is introduced to the restaurant industry in phases, we will move further from the ideals that the hospitality industry was founded on. Understanding the impact on human beings and their interaction with dining out is essential. Although technology is promising more efficiency, human beings are compromising one of the basic needs, which is their sense of belonging and connection. Aside from the restaurant industry, technology is taking over other global industries as well.

Researching human emotion and psychological impact of such changes is an opportunity to

better understand the best way to implement technology in service industries.

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