Operating a Successful Restaurant

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Abstract

The purpose of this project was to learn the most important attributes needed to operate a restaurant successfully. Through literary review, five attribute areas were identified as necessary for successful operation. These areas were: restaurant managers needed experience. The food had to be of good quality while following food safety regulations. The menus had to be diverse. Finally, the manager needed both employee retention and customer service skills. The first hypothesis stated a correlation would exist between the success of the restaurant and the practice of these attribute areas. The second hypothesis stated that out of a list of attributes, restaurant managers would identify these primary attributes as most important to the success of the restaurant. A Pearson r correlation was used to test the correlation between restaurant manager practices and their success, while a paired t test was used to test which attributes were viewed as most important for successful operation. The results of these tests were inconclusive. One may infer that the literature should be questioned while others may question the participant’s responses and wish for an older respondent sample. The survey questions may also be questionable due to fact the survey was designed for this project. Exploratory analyses were also preformed and suggestions for future research were included.
Introduction and Statement of Purpose

Statement of Purpose

The purpose of the project was to determine if a correlation existed between managers who practiced the top five attributes discussed in the literature and the success of the restaurant, more specifically, to see if managers who practiced these attributes were as successful as the literature seemed to predict they would be. In addition, the study was also designed to determine which attributes managers believed most important for operating a restaurant successfully.

The focus was on the American restaurant market including fast food chains, name brand chains and small restaurant owners which were researched between February of 2009 and September of 2009. Managers from the Tulsa area restaurant market were interviewed and the information compared with that of Lee, Renig, and Shanklin (2007). Other information included documented interviews with Golden Corral’s Vice President of Operations and operation statements. The National Restaurant Association (NRA) (2009) database was also used to obtain restaurant industries past growth and projected growth.

Furthermore, due to the growing number of people opening, operating, managing and employed in the restaurant industry, understanding how to operate a successful restaurant has become increasingly important.

Context of the Organization

Setting of the problem. Size of the restaurant, or type of restaurant did not matter when determining the goals of each restaurant. Each restaurant wanted to make money and control both food and labor cost while successfully retaining employees. Restaurants have been known as one of the toughest businesses to operate successfully, for many reasons including long hours,
high turnover and low pay (Heffes, 2004).

The focus of the study included the basic design of most restaurants which were structured as follows: managers, assistant managers, cooks, and service staff. The type of service staff depended upon the type of restaurant and the size of the operation. Service staff may have included cashiers, waiters/servers, dishwashers, bus persons, hosts/hostess and/or bartenders. In some of the smaller operations, the owners doubled as managers. Most restaurants were divided into two sections, kitchen staff, and the dining room staff. Kitchen Staff included cooks, bus persons, and dishwashers. The dining room staff usually consisted of everyone else; servers, cashiers, host/hostesses and dining room managers.

Attention was focused on employees, and how management felt about their employee retention and employees’ ability to take initiative. Attention was also given to the areas of management experience, restaurant sanitation, and customer service along with employee satisfaction in order to describe their role in the operation of a successful business.

**History and background.** During my first restaurant job in the fall of 1997 I decided I wanted to open my own restaurant, since then I have worked every position available to increase my knowledge of the restaurant business. In 2004 I registered with the city of Tulsa and created “Legacy Restaurant and Catering”. With the potential of opening my own restaurant, I wanted to know how to operate successfully which includes maximizing profits and minimizing expenditures along with employee management, winning new customers and retaining current customers.

Operating a restaurant successfully may prove to be difficult considering a study performed at Cornell University, showed that 23% of restaurants fail within the first year and
67% will fail within the first three years (National Restaurant Association, 2009). In the 1970’s the restaurant industry nationwide grossed 42.8 billion dollars. The restaurant industry was estimated to bring in 565 billion dollars for 2009 which was estimated at about 4% of the United States Gross Domestic Product (National Restaurant Association 2009). $565 billion dollars was over a $500 billion increase in 40 years. The increase was largely attributed to women entering the work force on a large scale and the emergence of dual income families. The extra money from a dual income family allowed for luxuries such as dining out. Dining out has increased not solely as a luxury, but also out of necessity since dual income families had less time to cook at home (Heffes, 2004).

Scope of the Problem

During the study of how to operate a successful restaurant, the subject matter included surveys completed by local area restaurant managers, journal articles with interviews from corporate executives of restaurant chains. The restaurant study also included restaurant employees in relationship to their contribution to company goals and management interaction with the employees. The study also analyzed attributes necessary for an owner, operator, manager or entrepreneur to operate the restaurant in a manner which increased sales and profits while maintaining low food, labor and other costs. Other important areas of focus revolved around restaurant food safety, food quality, and market diversity along with employee retention. Finally, the study attempted to identify the practices restaurant operators should perform.

During the course of the project, areas not studied were restaurant employee’s specific job functions or the employee’s daily activities including the employee’s training or abilities. Another area excluded from the study was the non-controllable cost of restaurants, the non-
controllable cost included, maintenance, utilities and insurance. When analyzing corporate data, specific restaurant menus and themes were also excluded from the study. The study did not compare specific management styles or the styles’ relationship to the success of a restaurant due to the length of the project and time constraints.

**Significance of the Problem**

The successful operation of a restaurant was important to future and potential operators, current operators and employees’ of the restaurant industry since the restaurant industry had 945,000 locations and employed 13 million people or one-third of the American work force (National Restaurant Association, 2009). Current operators could have benefited from either the reassurance of performing necessary functions or identifying weakness in their operation. Last, the project was most helpful in the preparation of the business plan for Legacy Restaurant and Catering Co and aid in the company’s success by identifying areas of training needed and attributes to focus on through prioritization.

**Review of Literature**

While researching how to operate a successful restaurant, certain elements were viewed as key to running a successful restaurant by each author. These areas included, possessing restaurant management experience, monitoring food safety and quality, diversity in an ever changing market, along with the ability to control cost, retain good employees and customer service.
Management Experience

“Passion isn’t enough. You’ll need a sound concept and restaurant management experience” (Miller, 2008, p.13). In order to operate a restaurant successfully one must at least have a restaurant background or do intense research on the subject. If one has spent his or her working life as an electrician or doctor, the person is not likely equipped to operate a restaurant. When a person has ten years experience in a field the person has become more knowledgeable than the majority of the population in that area and would benefit from opening a business related to that field (Howell, 1997). People should not open a business in a field where experience was not obtained (Howell 1997). Lee, Renig, and Shanklin (2007) found, based on an independent survey of food and beverage directors and administrators of assisted living facilities, of thirty-four attributes required to be an effective manager the top ten were as follows: One should act as an effective team leader and team member. One should manage all aspects of the operation. Ensure the operation follows state and federal regulations. Demonstrate effective time management practices. A manager should posses the ability to coach team members. Managers need the ability to communicate verbally and in writing, effectively manage projects and be involved in self professional development. Furthermore, Kerrii Anderson Executive Vice President of Wendy’s International said the restaurant business is the toughest to operate successfully, in order to do so; the restaurant must be operated by finding new ways to cut costs while developing new products and approaches (Heffes, 2004).

Food Safety and Quality

“The Center for Disease Control (CDC) estimated 76 million illnesses, 325,000 hospitalizations and 5,000 deaths are due to food borne illnesses each year, with the majority of
the reported cases being traced to public eating establishments” (Lynch 2005 p.9). Food borne illnesses have spread through foods or water contaminated with viruses or bacteria. The most common reasons for food borne illness were a result from a restaurant’s inability to control storage temperatures and poor employee hygiene. Since the restaurants employee one-third of the American work force the importance for proper sanitation increases every day. Most people, if they had a food borne illness from a restaurant, will not return and will tell everyone they know that the restaurant made them sick. A food borne illness occurrence would negatively affect a restaurant’s ability to make money, and in turn would affect the level of success the restaurant experienced. Many states require safe food handling education to food service workers; Oklahoma for example, requires a certified manager to be present during all hours of operation, and the manager be educated in: sanitary facilities, food protection, food borne diseases/symptoms, cleaning/sanitizing, and personal hygiene, along with, safe food handling practices, operational problems, self inspections, personnel training and motivation. (Lynch 2005)

According to Lee, Renig, and Shanklin (2007) food quality involves more than food safety, taste is just as important. In fact, during the research conducted by the group, food quality was a consideration for those who have looked into assisted living facilities. Food quality at assisted living facilities has played a part in the determination of value received and overall quality of care received at the assisted living facilities. Others such as Jordan Bush and Sara Sawicki, of Fire on the Mountain Buffalo Wings, Portland, Oregon who completed their first one Million dollar Year in 2004, expressed the secret to their success was they served good food in a way that is “different and better than the competition”(Miller, 2008, p13). One ingredient to Wolfgang Pucks secret to success is also great food. Serving quality food includes the
presentation of the food and making the less expensive items look as good as more expensive ones. Furthermore, the restaurants have increased profits said Ted Fowler of Golden Corral (Wittebort, 1992). Corral has also used sight and smells during peak dining hours to entice appetites. The Golden Corrals purposely stage fresh baked rolls during diner service to increase the guest appetites, with a combination of the smell of fresh baked bread and with the sound of the cooking timer buzzing.

Diversity

Another key point in operating a successful restaurant mentioned was menu diversity. The ability to offer something the other companies do not, especially when operating a smaller business, was important to the survival of the business. (Howell, 1977, p.3) Nelson further stated the importance of keeping up with the market trends and customer needs. Golden Corral has remained successful because they “…borrow ideas from everybody and steal from the best…” (Wittebort, 1992, p.2) To acknowledge the importance of diversity Golden Corral tailored their menus based on the area of the county they operated in. For example, in Texas based markets, the menus included Tex-Mex type foods. Restaurants on the west coast had more fresh fruits available and in the north east Golden Corrals served more pastas.

Employee Retention

In the restaurant business, a major concern has always been employee retention. Employee turnover rates have been as high as 250% on the line level, or employee level and 20% at the management level. Most employees in the restaurant business have been high school and college students. In order to retain and attract new employees, restaurants must create a people
focused culture (Heffes, 2004). Listening to what employees want and need out of their job helps in the employee’s decision to stay at a job. Employers needed to help employees grow, offering educational opportunities by on the job training or advancement opportunity. Managers who have expressed an interest in the employees’ career goals have also increased the employees’ desire to stay with the company. Managers were not solely responsible for employee growth. Employees needed to be willing to open up to management and express the employee’s career goals. Employees benefited most by introducing themselves to upper management and beginning a relationship early (Terry, 2001). Managers should also try to make the work environment fun so that employees don’t just work a 40 hour week but they continue to work on issues after work (Howell, 1997).

**Customer Service**

Great customer service has made restaurants and other businesses successful; consequently, poor service could also lead to failure (Aguilera, 2001). When customers have had great service at a restaurant and poor food they will return. If however they received great food and poor service, most will not return. One reason for this development has been the emergence of more restaurants and a larger variety. Customers did not have to compromise, if they did not receive the service they expected, they simply went somewhere else. One of the areas focused on for great customer service started with making business decisions based on the customer rather than the operating cost. One example of demonstrating customer focus was to give out condiments rather than charging for it. Some other methods of customer focus included, design of the establishment to be appealing to the eye and music or sounds at appropriate levels to increase the dining experience. In addition to the creation of a great ambiance, creating a
customer oriented culture was also important. In order to create a customer oriented culture, companies had to hire, train and reward the proper behavior of employees. The companies needed to communicate consistently with their employees on how to engage customers in a manner that would ensure the customers return. A major part of creating the customer oriented culture was making sure the management staff was also consistent with their decisions and those decisions where customer based. To further the success of a customer focused business, employees needed to be empowered to make decisions and handle customer issues. Another part of creating a great customer service experience was the company’s ability to study and understand what the customers need, want and expect. Success in this area was dependant on the company’s ability to continually study customer’s expectations and respond to them by developing ways to avoid the problems in the future (Ford & Heaton 2001).

Methods

Hypothesis

The purpose of the project was to determine if a positive relationship existed between managers who practiced the top five attributes, discussed in the literature and the success of the restaurant, specifically, to see if managers who practiced these attributes were also successful. In addition, the study was also designed to determine which attributes managers believed most important for operating a restaurant successfully.

Design and Instrumentation

The research used a correlation design to determine the similarity between participant ratings on success and on best practices. The dependent variable was labeled “Success Scores’
category. The success scores were calculated using questions 25 through 37 on the survey and comprised questions concerning areas such as the restaurateur’s profitability, turnover and health inspections. The independent variable was the “Best Practices” scores. These questions were generated based on the literature review as being important to the success of a restaurant and comprised five major attributes needed. There were five subscales that were created using the best practices questions. These were called the Five Major Attributes: management experience, customer service, employee retention, cost containment and food quality.

There were also “filler” questions that were used. Filler questions were general restaurant questions that had not appeared in the literature review as being important, such as seating arrangements and restaurant decorations. The 5 major attributes needed category, was compiled and called the best practices score. The filler questions category was compiled using questions 17, 18, 20, 21, 23, and 24. These filler questions were added in an attempt to avoid bias by not “giving away” the actual intent of the research; additional popular elements normally thought about when running a restaurant.

The total number of statements in the managerial attributes and practices section of the survey was 38 and each statement could score ranged from 1 to 5 points resulting in a low score of thirty points and a high score of one hundred-fifty points. A score of 1 meant that the attribute or element was not important for operating a restaurant successfully and a score of five meant the attribute or element was highly important to operating a restaurant successfully. The questions for the success scores were 42 through 46, and were developed to determine whether or not the operator was successful. These questions included: “I had run a profitable restaurant,” and “My restaurant has been closed by the health department.”
The full questionnaire may be found in the Appendix. The survey was written for this project, after completion, the survey was issued to three fellow experienced restaurant managers who confirmed face validity. In addition, Cronbach reliability of measure was used.

**Participants**

The participants of this study included 27 restaurant managers and owners with at least three years experience in restaurant ownership or restaurant management. The three year experience level came from job ads found on Tulsaworld.com and monster.com asking managers to apply only if they had a minimum of three to five years experience in restaurant management. The participants were varied in age, race, religion and sex.

These managers or owners were from various restaurant backgrounds including fine dining, fast food, large corporate chain restaurants and small restaurant owners. A convenience sample was drawn from restaurants in the Tulsa area. Each category of restaurant received ten surveys totaling forty surveys.

In addition to the above attempt at controlling bias, the participants were selected by having restaurant management or restaurant ownership experience. The selections were made without regard to age, race or gender. Furthermore, to minimize the occurrence of situational variables, fast food restaurants, small restaurants and restaurant chains were included in the dispersal of the survey and the amount of surveys dispersed were equal for each category of restaurant.

**Procedure**
The research began with finding articles related to the successful operation of a restaurant and finding popular elements discussed in each article. After finding these articles, the questions were developed and applied to the survey. Next, the survey was given to some restaurant managers whom I have worked with to confirm validity. After validation, the surveys were administered randomly within a twenty-mile radius of south Tulsa, Oklahoma, each manager/owner was asked if they had at least three years experience as a restaurant employee before participating in the survey. Once the surveys were returned, the calculations for the statistics were performed to determine the results of the two study hypotheses. In addition, exploratory predictive analyses were run.

**Data Analysis**

**Descriptive analysis** Means and standard deviations were found using WebSTATISTICA (StatSoft, Inc., 1992 – 2007), for the best practices and the success scores. Histograms showed the distribution of each score. A scatter plot was inserted to show results of the Cronbach reliability test. A surface plot was also inserted to show the results of the correlation between the questions regarding the five attribute areas and the filler questions. Additional analyses were performed to determine possible other relationships and which may be found in the exploratory section.

**Inferential analysis** This study had two hypotheses. The first null hypothesis stated the best practices scores would not predict a successful restaurant (Ho: $\rho=0$). The first alternate hypothesis stated that the best practices scores would predict the success scores (Ha: $\rho \neq 0$).
During this analysis, the .05 significance was used with 25 degrees of freedom. A Pearson r correlation was used to test the hypothesis.

The second null hypothesis was the sum of the scores of the 5 major attributes areas needed to operate a successful restaurant, according to the literature, would be less than or equal to the scores of filler questions (Ho: $\mu_5 \leq \mu_f$). The second alternate hypothesis states that the scores of the 5 major attributes needed would be greater than the scores of the filler questions (Ha: $\mu_5 > \mu_f$). A paired t test with 26 degrees of freedom was used at the .05 level of significance. It should be noted that the question values for each person were added and then divided by the number of questions before the t test was performed. In this way, the difference in the number of questions would not influence the outcome. I wanted to find out if the items that were cited in the literature as being important to the success of a restaurant would be as important to actual restaurateurs as were the items not found in the literature review. Most of the literature on the topic did not involve empirical studies, so I didn’t know if there might be a discrepancy between what the literature thought was important and what those who actually were operating restaurants thought was important.

**Limitations**

Generalizing the conclusion of this project may not have been possible due to the limitations placed on the time allotted for completion. During the year of this study, the national market was subject to high oil prices which contributed to inflation of food costs. The market also suffered a subsequent recession and could have affected the ability to locate smaller business owners due to business closings; these businesses may have been successful in a fair market. Furthermore, the survey was only conducted in a portion of Tulsa, which may not reflect the possible responses from other regions of the nation. The reliability and validity of the survey
were questionable since the survey was created for this project. Even though the survey was reviewed by experienced restaurant managers, the survey may not have construct validity. Other factors included; the turnover rate for the restaurant managers which is about 28% according to the National Restaurant Association. According to Cornell University, 27% of restaurants will fail during the first year which will make repeating the survey with the same restaurant or manager difficult.

**Summary of Results**

**Descriptive Statistics**

The data were analyzed using WebSTATISTICA (Stat Soft, Inc., 1992-2007). A total of 27 restaurant managers responded out of 40 surveys handed out. There were 14 females and 13 males. Figure 1 showed the ages of the participants.

![Pie Chart of Age](JP_Harrison.STA 51v30c)

Figure 1. Ages of the participants showed that 70% were less than 40 years.
The mean of the success score questions was 48 and standard deviation was 3.62. The mean of the best practices scores was 151.56 with a standard deviation of 3.63 see Table 1.

**Table 1**

*Mean and Standard Deviation*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Valid N</th>
<th>Mean</th>
<th>Sum</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Variance</th>
<th>Std.Dev.</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success</td>
<td>27</td>
<td>48.0000</td>
<td>1296.000</td>
<td>41.0000</td>
<td>55.0000</td>
<td>13.1538</td>
<td>3.62682</td>
<td>0.697982</td>
</tr>
<tr>
<td>Best Practices</td>
<td>27</td>
<td>151.5556</td>
<td>4092.000</td>
<td>124.0000</td>
<td>166.0000</td>
<td>134.5641</td>
<td>11.60018</td>
<td>2.232455</td>
</tr>
</tbody>
</table>

A histogram of best practices scores may also be seen in Figure 2.
In Innovation and Empowerment: SNU-Tulsa Research Journal, Volume 3, Issue 1

Figure 2. This histogram of best practices shows the scores along the X axis and the number of observations along the Y axis.

Next, in Figure 3, one will see a histogram of “success scores.” These questions were designed to determine whether or not the manager was indeed successful by asking questions regarding profitability, customer perceptions etc.

A Cronbach reliability test was performed on both the best practices variable and the success score variable. The best practices Cronbach score on the raw data was .902 and the standardized data was .904 showing high reliability. However, when calculating for the success scores, the alpha was .168; very low showing poor correlation and the conclusions therefore,
likely would not be accurate. It was not determined why the success scores did not have internal stability; perhaps the participants’ experiences were inconsistent such as having a basically successful restaurant but then having one incident in which the health department had closed it down. To help the situation, I tried determining if a new combination of questions would improve the reliability. Since the Cronbach score was low for success, a feature selection and root cause analysis was performed on the success questions to determine which of the questions most predicted the total score, the importance plot may be seen in figure 3. The questions that seemed to be most important for success were as follows: 33, 37, 32,38,28,27 and 31. A Cronbach alpha was then performed on these questions and resulted in .735, which is fair reliability. Figure 4 shows the importance plot for the questions that most predicted success scores. Once those were determined, they were added together to form a new success score.
Figure 4. Importance plot for success score. The length of the bar indicates the importance of that item in predicting the dependent variable. In this case, the procedure fulfills a sort of bootstrapping function.

Results of Significance Test

This experiment had two hypotheses. The first null Hypothesis stated the best practices scores would not predict a successful restaurant (Ho: \( \rho = 0 \)). The first alternate hypothesis stated that the best practices scores would predict the success scores (Ho: \( \rho \neq 0 \)). During this analysis, an .05 significance was used with 25 degrees of freedom. The Pearson r correlation test was used to test the hypothesis. The test had a critical value of \( \pm .367 \). Since the calculated value at .20 was less than the critical value, the null hypothesis could not be rejected. The best practices scores did not predict success scores. (Please see Figure 5 for the scatter graphs)
Figure 5. Scatterplots for correlation between the best practices scores and success scores for each respondent. Please note that the new success score was used as the new success score had better reliability.

During this study, the questions concerning the 5 major attributes were related to customer service, cost control, employee retention, food quality, and management experience. The filler questions were compiled from questions such as; type of food served, restaurant decoration, seating arrangement, menu diversity, staff appearance and cleanliness of dining room. The 5 major attributes questions were determined by the literature, whereas the filler questions were not. The second null hypothesis was the scores of the 5 major attributes needed to operate a successful restaurant would be less than or equal to the scores of filler questions ((Ho: $\mu_5 \leq \mu_f$). The second alternate hypothesis stated that the scores of the 5 major attributes needed
would be greater than the scores of the filler questions (Ha: $\mu_5 > \mu_f$). Again, the scores were derived by finding the total score for each person across the items and then dividing by the number of items; thus eliminating the effect of the difference in number of items. A paired t test with 26 degrees of freedom was used at the .05 level of significance. The critical value was +1.706 and the critical value was higher than the actual value of – 1.358. Therefore, the null could not be rejected. The five major attributes needed to operate a successful restaurant did not exceed the scores of the filler questions. Evidently, the restaurateurs who judged which components were most important to the successful running of a restaurant, did not agree with the literature as to which elements were crucial. As one could see below in figure 6 the graph shows the little difference between the scores of the two groups.

![Figure 6](image_url)

*Figure 6.* Surface plots of the five crucial areas (on left) according to the literature, versus the filler questions (on right). Note that the graphs seem fairly similar.

**Exploratory Data Analyses**

I wanted to see what among the success variables might predict what the participants considered important in terms of the best practices as identified in the literature. This exploratory analysis was done so that I would be able to discover new hypotheses for further investigation by another researcher. Again, a feature selection and root cause analysis was
performed and this time using the best practices total as the dependant variable with the success questions, 24-38, as the independent variables. As may be seen in Figure 7, the results suggested that perhaps the questions about staff initiative, whether or not the manager had to sell at a loss, and whether or not the manager had had a restaurant closed by the health department seemed to be most important for predicting best practices.

![Importance plot for best practices total. The top two or three may be better predictors than the bottom three.](image)

An ANOVA was performed on the top two questions using Staff Initiative and Sell at a Loss as independent predictor variables, with best practices used as the dependant predicted variable. A main-effects ANOVA was utilized and Table 2 shows the outcome.

**Table 2**

Main-Effects ANOVA for Best Practices Scores using Staff Initiative and Sell at a Loss as Independent Variables.
Interestingly, the p values were very small for both; if one were doing two analyses on the same data in a confirmatory manner; these would be considered “significant.” (True if using the Bonferroni correction of .05 / number of tests, or .025 as the level of significance for the .05 level.) Figures 8 and 9 show the graphs of the relationships.

Figure 8. Best practices scores by the Sell at a Loss variable mean with 95% confidence intervals.
It appeared that if one definitely did not have to sell at a loss, then the person scored in the high midrange of the thinking the best practices, as identified by the literature as being important. If one had to sell a restaurant at a loss, then the person gave higher scores to the best practices than did neutral or disagree participants. However the confidence intervals did not seem to separate the strongly disagree participants from the agree participants. Perhaps the person wished he or she had complied with the best practices; or perhaps when following the best practices, the business went awry. The pattern seemed inconsistent. There were few subjects in most categories. However, the most subjects were in the category Strongly Disagree for the variable Sell at a Loss. They, at least, were not saying that the literature-identified variables were extremely important.

Next the graph for Staff Has Initiative may be seen in Figure 9.
Figure 9. Opinions of the best practices by the question of whether one’s staff goes beyond what is asked of them and takes initiative.

There was no consistent pattern in the analysis. Once again the highest scores on best practices occurred when the participants were on either end of the continuum; strongly disagree and strongly agree. I would have liked to have asked each respondent what he or she was thinking; was it a matter of regret on the part of those who had employees that were less than desirable (strongly disagree) that he or she had not followed the best practices? Or was it a matter of there not being an actual meaning to the best practices?
Finally, another feature selection was done using the new success scores of the five sub scores along with age and gender. The importance plot suggested that age of the manager may be important. Figure 10 shows the results of the ANOVA concerning best practices and age.

![Age; LS Means](image)

**Current effect:** $F(3, 23) = 2.3827$, $p = 0.09559$

**Effective hypothesis decomposition**

Vertical bars denote 0.95 confidence intervals.

*Figure 10.* Best practices by age seems to indicate a trend in the older participants valuing more the best practices.

Then, I wondered how the new success score (the more reliable combination of items) might relate to age. Figure 11 shows the ANOVA for that analysis.
The success seemed positively related to age. Even though both measures were nominal, I then correlated the age categories with the years in restaurant categories. A small but significant positive relationship ($r = .44$, $p < .05$) emerged. The older participants tended to have been in the restaurant business longer. A hypothesis for a future study might revolve around the age of the participant, or perhaps the number of years the participant was in the restaurant business.

**Discussion and Conclusions**
The purpose of the project was to determine the elements required to operate a successful restaurant. The project was also designed to rate certain attribute areas and determine which of the attributes the owners or managers may view as most important to operating a restaurant successfully.

**General Discussions and Conclusions**

The first alternate hypothesis stated that a correlation would exist between a manager’s practices and their success as a manager. If a manager had high scores on the best practices sections they would be successful. The data did not support this hypothesis. Even though the reliability test for Best Practices scores showed high reliability at .902, the reliability of the success scores was low at .168 indicating that several of these question should have been yes or no questions rather than rated from one to five strongly disagree to strongly agree. This may be the reason that the standardized alpha was inconclusive. Another possibility considered was participant answers. Some participants may not have thought through the answers or were possibly embarrassed and may not have answered truthfully if they were not practicing attributes they should. The participants may have also been embarrassed and not answered truthfully to questions concerning whether or not they were successful in operating their restaurant.

On the other hand, even when the scores were revamped to achieve an acceptable level of internal consistency, there still was not a significant correlation between success as a restaurateur and the literature-identified important factors for success.

The second alternate hypothesis stated that the scores of the 5 major attributes needed would be greater than the scores of the filler questions. This hypothesis was not supported either. There was not a significant difference between the scores. In fact, the scores of the filler
questions were slightly higher than the scores of the major five attributes. The results suggest the opposite. The results of this test may have indicated that the filler questions were thought of as just as important to the successful operation of a restaurant as the others. Furthermore, one could conclude that the literature was questionable.

However, at the end of the exploratory section, it seemed that an age-related effect may have been found. It seemed that the older participants had been in the restaurant business longer. They, obviously, had proven their success, as they were still in the business. They did seem to value the literature-identified best practices as being best practices. I decided not to turn my back on the best practices identified in the literature that I was able to find.

At this point, I think I may believe that these five elements may, indeed, have some worth in establishing a restaurant. They seem plausible, at least. The five are, management experience, customer service, employee retention, cost containment and food quality.

**Strengths and Weaknesses**

One of the strengths of this study was that the survey was restricted to managers with at least three years of restaurant management experience. The restriction was to limit responses to those who have had enough experience to realize which attributes were important and which were not. The second strength of the project was the city in which the study was performed offered large quantities of study subjects in every area of the restaurant business, from large corporations to small businesses and fast food, casual dining and fine dining allowing for a more diverse representation of data.

Some weakness may include but were not limited to the number of responses were only twenty-seven out of 40. More responses from other restaurant managers may have affected the results. Another weakness may be that some participants rushed through the survey and did not
take sufficient time to consider their responses. Another weakness of this study was the results of the Cronbach reliably test alpha at .168 for the original success score. This result may due to the design of the questions; some should have been yes or no responses. A third weakness of this study may have included survey length. The survey may need an equal amount of question for each sub category to be more effective. The last weakness may have been that many of the participants were under 40. It is possible that three years experience really was not enough for one to truly appreciate the best practices.

**Recommendations**

Further research on this topic should be conducted considering the results were inconclusive. A few changes to the design of the experiment may yield more detailed results. One change could include further literary research. Secondly, the questions on the survey should be reviewed for consistency. The responses should also be changed to yes or no for the appropriate questions. Third, the survey should include a section that has the manager rate themselves from 1 to 5 on how good they are at the areas they rated by importance. In addition, changes to the survey should reflect the consideration that managers may believe certain attributes are important to be successful, but have not yet developed those attribute and may not be proficient in those areas. Furthermore, they may not yet be successful as a result. Another study should be done that finds more participants who are older and who have been in the business for a long time. Therefore, lastly, the experience requirement may need to be changed to ask only manager with 5 or more years experience to participate in the survey.

**Suggestions for Future research**
This experiment included another area in the beginning; however, it was omitted due to the length of this project and the time frame. This area consisted of asking managers to list practices that should be avoided to be successful. The knowledge of what not to do may be as beneficial as knowing the attributes to focus on for success. Secondly, the design of this study included surveying all styles restaurants from fast food to fine dining to eliminate situational variables. This decision may have caused the lack of significance found in this experiment. As a result, I recommend deciding what type of restaurant one would like to open and limit study to that particular type of restaurant to focus on the most important attributes needed to be successful in that type of business. Finally, another area of interest may include the study of restaurant successes concerning location. Some literature reviewed for this project suggested a strong correlation between a restaurants success and the location.
References


### Restaurant Operations Survey

Please rate the following statements based on their level of importance concerning the successful operation of a restaurant.

1 = Not Important 2 = Some What Not Important 3 = Neutral 4 = Some What Important 5 = Very Important

<table>
<thead>
<tr>
<th>Managerial Attributes / Practices</th>
<th>Level of Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Experience of more than three years</td>
<td></td>
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<tr>
<td>Ability to Control Labor Cost</td>
<td></td>
</tr>
<tr>
<td>Ability to Control Food Cost</td>
<td></td>
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<tr>
<td>Ability to Control Supplies Cost</td>
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<tr>
<td>Employee Retention Attributes</td>
<td></td>
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<tr>
<td>Employee Training</td>
<td></td>
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<tr>
<td>Time Management Attributes</td>
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<tr>
<td>Leadership Attributes</td>
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<tr>
<td>Communication Attributes</td>
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<tr>
<td>Passion For Food</td>
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<tr>
<td>Formal Education/Degreed</td>
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<tr>
<td>Ability to Remain Calm Under Pressure</td>
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<tr>
<td>Decision Making Attributes</td>
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</tr>
<tr>
<td>Menu</td>
<td></td>
</tr>
<tr>
<td>Menu Item Presentation</td>
<td></td>
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<tr>
<td>How The food Tastes</td>
<td></td>
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<tr>
<td>Food Safety/ Sanitation</td>
<td></td>
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<tr>
<td>Menu Diversity/ Menu Item Rotation</td>
<td></td>
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<tr>
<td>Type of Food Served</td>
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<tr>
<td>Restaurant Atmosphere</td>
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<tr>
<td>Knowledge of Staff</td>
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<tr>
<td>Restaurant Decoration</td>
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<tr>
<td>Seating Arrangement</td>
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<tr>
<td>Customer centered attitudes</td>
<td></td>
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<tr>
<td>Staff Appearance/Professionalism</td>
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<tr>
<td>Clean Dinning Area</td>
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</tbody>
</table>
For the Following, Answer 1 Strongly Disagree, 2 Disagree 3 Neutral 4 Agree 5 Strongly Agree

<table>
<thead>
<tr>
<th>Success</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>My clientele / Sales have increased</td>
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<tr>
<td>I have had to sell a restaurant at a loss</td>
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<tr>
<td>I have run a profitable restaurant</td>
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<tr>
<td>My customers are friendly</td>
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<tr>
<td>I must handle customer complaints daily</td>
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<tr>
<td>I have a high turnover rate</td>
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<tr>
<td>The employees do only what they are asked to do</td>
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<tr>
<td>The employees go above and beyond/ Take initiative</td>
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<tr>
<td>Results from health department scores are positive</td>
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<tr>
<td>My restaurant has been closed by the health department in the past</td>
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<tr>
<td>Training employees is difficult</td>
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<tr>
<td>Customers complain to corporate weekly about service</td>
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<tr>
<td>We receive complements on the food or service daily</td>
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</table>

<table>
<thead>
<tr>
<th>Years Working In Restaurants</th>
<th>Circle One</th>
<th>0</th>
<th>1 to 3</th>
<th>3 to 5</th>
<th>5 to 10</th>
<th>10 or more</th>
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<table>
<thead>
<tr>
<th>Years Managing Restaurants</th>
<th>Circle One</th>
<th>0</th>
<th>1 to 3</th>
<th>3 to 5</th>
<th>5 to 10</th>
<th>10 or more</th>
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<table>
<thead>
<tr>
<th>Gender</th>
<th>_ _ Male</th>
<th>___Female</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>AGE</th>
<th>___18 to 28</th>
<th>___29 to 39</th>
<th>___40 to 50</th>
<th>___51 +</th>
</tr>
</thead>
</table>