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Bring Chipotle to Carrollton

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Abstract

Motivation/Central Purpose: Despite its popularity with college students across the U.S., the closest Chipotle Mexican Grill location to the University of West Georgia (UWG) campus is an hour away. To persuade Chipotle management to open a location in Carrollton, Georgia (the location of UWG), our team set out to prove that there was a significant demand on campus for a Chipotle location nearby, and make recommendations as to how a potential location could maximize its profits. Methodology: The research team created a survey instrument to be administered to UWG students. It consisted of six demographic questions and nine questions concerned with individual opinions on aspects of Chipotle and its ongoing GMO controversy. The methodology included the setting up of a booth in a high-traffic area on campus. The team asked passers-by to fill out surveys, using two carnival-style games and candy prizes as attractions. Using this methodology, the team ultimately gathered 385 surveys, which were then analyzed using SPSS. Methods used include data summaries, T-tests, correlations, chi-squared tests, and regression analyses. Based on the conclusions from these tests, managerial implications and recommendations were developed for Chipotle management. Conclusions: Data summaries showed that sample demographics were reasonably consistent with those of UWG. Approximately 84% of participants Agreed or Strongly Agreed that they would like a Chipotle location nearby, ~70% said that they would eat at Chipotle 1-2 or 3-5 times per month. Mean responses for variables that indicated a positive general perception of Chipotle were significantly greater than 3.0, and all except one were significantly greater than 4.0. Chipotle's largest competitor would be Chick-Fil-A. T-tests showed significant preference for Chipotle among African-Americans over Whites. Chi-squared tests showed that eating at Chipotle creates a preference for continuing to eat there, in spite of recent GMO controversy. Results/Recommendations: There is unmet demand for high quality Mexican food such as is offered by Chipotle in the UWG area. Survey results indicate that demand within 5 minutes of the campus might be sufficient to justify a new store.

Keywords: Chipotle, Market, Carrollton

1. Introduction

Carrollton, Georgia, a city of approximately 24,000 people about an hour's drive from Atlanta, is the location of The University of West Georgia (UWG), home to approximately 12,800 students. UWG is a residential campus which includes almost 11,000 undergraduate students, many of whom are of traditional college-student age who live on or very close to campus. Thus, Carrollton is a college town which has several fast food chains represented in addition to a number of restaurants. We chose Chipotle Mexican Grill as our client for this research, after noting that despite its immense national popularity with college students, its closest location to UWG was an hour away, so there is an unmet need for a higher-quality Mexican food chain restaurant. Our research targeted the student body's general desire to have a Chipotle location nearby and their perceptions of and preferences for aspects of a potential nearby location. With the conclusions we have drawn from our following research, we hope to persuade Chipotle management to open

a location in Carrollton, Georgia and offer them suggestions as to how this location could attract the most student customers.

2. Methodology

Our questionnaire had two main parts: 6 demographic questions, and 9 questions concerned with individual opinions on aspects of Chipotle. The demographic portion allowed us to identify different sections within our sample and determine that our sample was representative of the UWG student population. The portion that dealt with individual opinions helped us determine whether or not the student population's demand for Chipotle was strong enough to merit opening a location in Carrollton, and what aspects of service a nearby location would need to focus on in order to be competitive. To administer our survey, we set up a booth in a high-traffic area on campus and had two games as attractions. After completing our questionnaire, participants had the option to play the games and win candy prizes. We ultimately collected 385 completed surveys, and analyzed them with the Statistical Package for the Social Sciences (SPSS).

3. Analysis

3.1 Data Summary

Several key conclusions are provided below**.**

T-tests were done comparing sample demographic proportions against official university proportions at the 0.01 level of significance; we found no significant difference between sample and population proportions for Males, Females, African-Americans, Whites, Freshmen, Sophomores, Juniors, and Age groups; so we concluded that our sample was reasonably representative of the undergraduate population. The proportion of Seniors was not representative due to the fact that the location in which we gathered surveys held mostly Freshman/Sophomore classes. Also, 99.7 percent of the participants in our survey were students at UWG. We therefore consider the following tests and conclusions to be relevant in terms of the UWG undergraduate population.

The majority of our sample had previously eaten at Chipotle (65.5 percent), and 84 percent Strongly Agreed or Agreed that they would like to have a Chipotle location nearby, with a mean of 4.39 on a five-point Likert scale that was significantly greater than 4.0 at the 0.05 level.

Seventy percent said they would eat at Chipotle 1-2 or 3-5 times per month, and only 3 percent said they would not eat at Chipotle at all. Out of our sample of 385, 32.81 percent responded 1-2 times per month, 37.76 percent responded 3-5 times per month, 16.15 percent responded 5-10 times per month, and 10.16 percent responded more than 10 times per month. We coded each of these variables as a mean: 1.5, 4, 7.5, and 12, respectively. Assuming that our sample is representative of the undergraduate student population of 10,753, we can apply these same proportional distributions and mean visits to the student body as a whole. With some basic math, we estimate 47,688 visits to a local Chipotle location per month. At an average price of $11.00 per Chipotle meal, this gives an estimated monthly revenue of $524,349 before tax. We note that the preceding computation does not include the addition 2,081 graduate students on campus, so even if they do not visit Chipotle with the same frequency, it is not unreasonable to expect that the estimated monthly revenue would approach $600,000.

We found that participants gave Chipotle the highest average rating out of ten restaurants, and when we tested Chipotle's average rating against that of the next highest restaurant rating (Chick-Fil-A), we found that Chipotle's average rating was higher at the 0.007 level of significance.

The farther a potential Chipotle location is from the UWG campus, the fewer the amount of students that are willing to travel to eat there; to attract 68.6 percent of our sample, Chipotle would have to open a location no more than 5 minutes driving from campus. Once moved to 10 minutes away, only 39.1 percent were willing to make the trip.

Only 46.5 percent of our sample Strongly Agreed or Agreed that Chipotle's current pricing was fair, with a mean of 3.28 on a five-point Likert scale that was significantly greater than 3.0 but significantly less than 4.0. This implies a need for discounts.

A possible solution might be found in the responses to the next question: 73.4 percent of our sample Strongly Agreed or Agreed that they would want the option to spend their Dining Dollars at Chipotle, with a mean of 4.1 on a five-point Likert scale that is significantly greater than 4.0. (Dining Dollars are a portion of student's meal plans that

are usually purchased at the same time as a meal plan. They can also be added online at any time of the year. These funds can be spent at any participating location. The appeal is that it greatly expands a student's dining options without paying anything out of pocket.)

We found that 75.8 percent of our sample was unaware of Chipotle's GMO labelling controversy at the time of taking the survey; when asked if knowledge of this controversy made them not want to eat at Chipotle, 56.4 percent were neutral and 32.4 percent Strongly Disagreed or Disagreed, making a total of 88.8 percent who were not affected by the controversy. The mean response was 2.7 on a five-point Likert scale and is significantly less than 3.0. (Note on controversy: In August 2015, Chipotle was sued for allegedly continuing to use genetically modified ingredients in their food, despite publicly announcing that they had gone GMO-free. Chipotle disputed the claim.)

3.2 T-Tests of Differences Between Means

We used SPSS to perform t-tests on our numerical variables to determine if there were any demographic or other segments within our sample. We found that African-Americans had significantly higher responses than Whites for Q8 (the desire to have a Chipotle nearby), Q9 (the amount of times they would eat at Chipotle per month), Q10.1 (the rating out of 100 for Chipotle), and Q13 (the desirability of spending Dining Dollars at Chipotle), showing that within our sample African-Americans have an overall better perception of Chipotle than Whites. On the other hand, Whites gave significantly higher responses than African-Americans for Q10.0, the rating out of 100 for Chick-Fil-A. (UWG is essentially a two-race institution with Hispanics, Asians, and Native Americans accounting for only about 5.5 percent of the population.) We found that participants who had previously eaten at Chipotle had a significantly better perception of it than those who had not, while those who had not previously eaten at Chipotle gave significantly higher ratings to restaurants other than Chipotle. This implies that eating at Chipotle once creates a preference for continuing to eat there. This implication was further stressed when we found that participants who were previously aware of the GMO controversy had a significantly better impression of Chipotle than those who were not aware of it. This surprising finding suggests that being more familiar with Chipotle (i.e. familiar enough to be interested in news of controversy) creates a better perception of it, despite controversy. This is touched on more fully in the Chi-Squared section. Tests of differences between means failed to show any significant differences between genders, so no distinct Gender segments exist in terms of any of the variables tested,

3.3 Correlations

We note that Q8 (desire to have a Chipotle nearby), Q9 (times participant would eat at Chipotle per month), Q10.1 (rating out of 100 for Chipotle), Q12 (perception of current Chipotle pricing) and Q13 (desirability of spending Dining Dollars at Chipotle) all tend to increase together; i.e. they all have at least a weak positive correlation with each other. We attribute this to a halo effect (if a consumer likes one thing about Chipotle, they are likely to also like other things about it). Based on this observation, we consider these five variables to make up the best image we have of a participant's overall impression of Chipotle; when we refer to the overall impression of Chipotle in this paper, we are referring to these five variables. We will discuss this further in the Regression Analysis section. As Q12 (perception of current Chipotle pricing) becomes more positive, so does Q13 (desirability of spending Dining Dollars at Chipotle). This suggests that even among students who do approve of current pricing, there is still a desire for some form of discount, in the form of Dining Dollars or a comparable offering. As ratings out of 100 for Papa John's/Domino's (Q10.6), Subway (Q10.7), and Zaxby's (Q10.9) increase, Q15 (negative effect of knowledge of the GMO controversy) decreases, meaning that the negative effect becomes larger. Since the restaurant ratings were placed before the GMO controversy question on our surveys, we can hypothesize that many of those who were negatively affected by the controversy had a bias against Chipotle from the outset. We note that increases in the rating out of 100 for Chipotle (Q10.1) cause all of the other restaurant ratings to significantly decrease, with the exception of Chick-Fil-A, which we might consider to be Chipotle's biggest competitor in the area.

3.4 Chi-Squared Tests

We conducted a Chi-Square Test for Independence between Q7 (Previously Eaten at Chipotle or Not) and Q14 (Aware of GMO Labelling Controversy or Not). With a Chi-Square value of 9.854 and Significance at the 0.002 level, we conclude that there is a significant relationship between Q7 and Q14 (see Table 1).

The analysis also reveals some other interesting information. We note that about 80 percent of those that were aware of the controversy had previously eaten at Chipotle, while only about 60 percent of those who were not aware of the controversy had previously eaten at Chipotle. Although the sample of those that were aware of the controversy is fairly small (81), this suggests that having knowledge of the controversy is related to having previously eaten at Chipotle. This seems to make sense, because if a participant has previously eaten at Chipotle, one would think that they would also be more exposed to (or more interested in) news regarding the company.

Table 1. Q7 (Previously Eaten at Chipotle or Not) * Q14 (Aware of GMO Labelling Controversy or Not) Crosstabulation

			Q14: Aware of GMO Labelling Controversy		
			No	Yes	Total
Q7:Previously Eaten at Chipotle or Not	No	Count	102	17	119
		% within Q7: Previously Eaten at Chipotle or Not	85.7%	14.3%	100.0%
		% within Q14: Aware of GMO Labelling Controversy or Not	40.2%	21.0%	35.5%
	Yes	Count	152	64	216
		% within Q7: Previously Eaten at Chipotle or Not	70.4%	29.6%	100.0%
		% within Q14: Aware of GMO Labelling Controversy or Not	59.8%	79.0%	64.5%
Total		Count	254	81	335
		% within Q7: Previously Eaten at Chipotle or Not	75.8%	24.2%	100.0%
		% within Q14: Aware of GMO Labelling Controversy or Not	100.0%	100.0%	100.0%

We then conducted a Chi-Square Test for Independence between Q7 (Previously Eaten at Chipotle or Not) and Q11 (How Far Participants Would Be Willing to Travel to Eat at Chipotle). With a Chi-Square value of 10.075 and Significance at the 0.002 level, we conclude that there is a relationship between Q7 and Q11 (see Table 2).

Table 2. Q7: Previously Eaten at Chipotle or Not * Travel Grouped into Walking and Driving Crosstabulation

			Travel Grouped into Walking and Driving		
			Walking Distance	Driving Distance	Total
Q7: Previously Eaten at Chipotle or Not	No	Count	55	77	132
		% within Q7: Previously Eaten at Chipotle or Not	41.7%	58.3%	100.0%
		% within Travel Grouped into Walking and Driving	46.2%	29.5%	34.7%
	Yes	Count	64	184	248
		% within Q7: Previously Eaten at Chipotle or Not	25.8%	74.2%	100.0%
		% within Travel Grouped into Walking and Driving	53.8%	70.5%	65.3%
Total		Count	119	261	380
		% within Q7: Previously Eaten at Chipotle or Not	31.3%	68.7%	100.0%
		% within Travel Grouped into Walking and Driving	100.0%	100.0%	100.0%

We also note that 70.5 percent of those who had previously eaten at Chipotle would also be willing to drive to Chipotle; this is almost the same as the proportion of participants who said that they would be willing to drive to Chipotle (68.7). This suggests that almost all of the people who would be willing to drive to Chipotle have also eaten there in the past.

We then conducted a Chi-Square Test for Independence between Q7 (Previously Eaten at Chipotle or Not) and Q2 (Race). With a Chi-Square Value of 9.271 and Significance at the .01 level, we conclude that there is a relationship between Q7 and Q2. We also note that almost 70 percent of Blacks or African-Americans have eaten at Chipotle in the past, while only about 60 percent of Whites have done so (see Table 3).

Table 3. Q7: Previously Eaten at Chipotle or Not * Race (With Values Under 6% Condensed) Crosstabulation

			Race (With Values Under 6% Condensed)			
			Black	Other	White	Total
Q7: Previously Eaten at Chipotle or Not	No	Count	49	9	75	133
		% within Q7: Previously Eaten at Chipotle or Not	36.8%	6.8%	56.4%	100.0%
		% within Race (With Values Under 6% Condensed)	32.0%	18.8%	41.2%	34.7%
	Yes	Count	104	39	107	250
		% within Q7: Previously Eaten at Chipotle or Not	41.6%	15.6%	42.8%	100.0%
		% within Race (With Values Under 6% Condensed)	68.0%	81.3%	58.8%	65.3%
Total		Count	153	48	182	383
		% within Q7: Previously Eaten at Chipotle or Not	39.9%	12.5%	47.5%	100.0%
		% within Race (With Values Under 6% Condensed)	100.0%	100.0%	100.0%	100.0%

3.5 Regression Analyses

In our first regression, with the dependent variable, Desire to Have a Chipotle Nearby (Q8), the adjusted R^2 is 0.324. The regression as a whole was significant at the 0.000 level (see Table 4).

The final regression equation from the data in Table 4 is:

Desire to Have a Chipotle Nearby =
0.318*(Times Participant Would Eat at Chipotle Per Month) +
0.212*(Perception of Current Chipotle Pricing) +
0.166*(Chipotle Rating – Adjusted) +
0.098*(Perception of Option to Spend Dining Dollars at Chipotle) (1)

From this test, we conclude that above independent variables each have a significant effect on the dependent variable, Desire to Have a Chipotle Nearby. The above regression equation lists them in order of impact. This is consistent with our findings in the T-Test and Correlation sections.

Table 4. Coefficients[a] for Desire to Have a Chipotle Nearby (Q8)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
4	(Constant)	3.048	.169		18.007	.000
	Q9: Times Participant Would Eat at Chipotle Per Month	.076	.013	.318	6.020	.000
	Q12: Perception of Current Chipotle Pricing	.165	.035	.212	4.650	.000
	Q10.1: Chipotle Rating - Adjusted	.006	.002	.166	3.376	.001
	Q13: Perception of Option to Spend Dining Dollars at Chipotle	.082	.037	.098	2.189	.029

a. Dependent Variable: Q8: Perception of Chipotle Location Nearby

In our second regression, the R^2 is 0.44; we have successfully explained 44 percent of the variance in the dependent variable, Times Participant Would Eat at Chipotle Per Month (Q9). The regression as a whole is significant at the 0.000 level. The final regression equation is:

Times Participant Would Eat at Chipotle Per Month =
0.356*(Chipotle Rating – Adjusted) +
0.263*(Perception of Chipotle Location Nearby) +
0.160*(Perception of Current Chipotle Pricing) +
0.141*(Moe's Rating – Adjusted) -
0.127*(Perception of Effect of GMO Controversy on Wanting to Eat at Chipotle) +
0.116*(Perception of Option to Spend Dining Dollars at Chipotle) -
0.077*(Age) (2)

From this test, we conclude that above independent variables each have a significant effect on the dependent variable, Times Participant Would Eat at Chipotle Per Month. The above regression equation lists them in order of impact. This is consistent with our findings in the T-Test and Correlation sections.

4. Conclusions

Tests of our six demographic variables—Gender, Race, Student at UWG or Not, Live On or Off Campus, Student Status, and Age—against population values provided by the university revealed that our sample was, for the most part, representative of the UWG undergraduate student body. The only proportions that did not match up were those for Seniors and students who Live On or Off Campus, but these are understandable due to limitations caused by the location in which we administered surveys. Therefore, all of the following conclusions can be seen as relevant in terms of the total undergraduate population.

Throughout our tests, Q8 (Perception of Chipotle Location Nearby), Q9 (Times Participant Would Eat at Chipotle Per Month), Q10.1 (Rating Out of 100 for Chipotle), Q12 (Perception of Current Chipotle Pricing), and Q13 (Perception of Option to Spend Dining Dollars at Chipotle) seemed to form a group. They all increased together in the Correlation and Regression sections, and in the T-Test section, sample segments who gave higher ratings to one of these variables also tended to give higher ratings to the other four. Considering this to be a manifestation of the halo effect, we have concluded that these five variables provide the best indicator of a generally positive perception of Chipotle. This is further reinforced by the fact that the Negative effect of the GMO Controversy (Q15) and the other restaurant ratings all decrease as these five variables increase. Throughout the rest of these conclusions, when we refer to the general perception of Chipotle, we are referring to these five questions.

With the Data Summary of Q8 (Perception of Chipotle Location Nearby) alone, we can see that there is a strong desire among the student body to have a Chipotle nearby; 84 percent Strongly Agree or Agree that they would like a location nearby, with a mean response of 4.39 out of 5.0. This conclusion is further reinforced by our finding that the mean response is significantly greater than 4.0. In terms of segments among the sample, we found that Black or African-American participants had a significantly greater desire to have a Chipotle nearby. Participants who had previously eaten at Chipotle, participants who would eat at Chipotle 5-10+ times per month, and participants who would eat at Chipotle even if they had to drive there also had a greater desire to have a location nearby. Correlation and Regression tests reveal that as answers to Q8 increase, so does the overall positive perception of Chipotle (in terms of Q9, 10.1, 12, 13, and 15), while ratings for other restaurants decrease.

Looking solely at the Data Summary for Q9 (Times Participant Would Eat at Chipotle Per Month), we see that the majority of students would eat at Chipotle 1-2 or 3-5 times per month, with the mean value falling in the 3-5 range. Coupled with the fact that only 3.1 percent said they would not eat there at all, we conclude that if a Chipotle location were to open nearby, it would receive a heavy volume of customers from UWG. Black or African-American participants and participants who would be willing to drive to Chipotle would eat there more often. Participants who would prefer to eat at Chipotle 0-5 times per month give higher ratings to other restaurants and are more discouraged by the knowledge of Chipotle's GMO controversy. Participants who would eat at Chipotle 5-10+ times per month have a better general perception of Chipotle.

Analysis of our ten different restaurant ratings, although tricky, did yield some interesting results. First and foremost, the mean rating for Chipotle is significantly higher than that of Chick-Fil-A, the next highest mean rating. This suggests that Chipotle's rating is the highest out of all the restaurants, which shows a generally positive attitude towards Chipotle. The fact that it has the second highest mean rating suggests that Chick-Fil-A would be Chipotle's main competitor in the area; this is reinforced in the Correlations section by the fact that the rating for Chick-Fil-A is the only restaurant rating that does not decrease as Chipotle's rating increases. White participants gave a significantly higher rating to Chick-Fil-A than Black or African-American participants; this suggests that if a Chipotle location opened nearby, they would be competing with Chick-Fil-A not only for customers, but for White customers especially. Another interesting result is that ratings for Papa John's/Domino's and Chinese increase together, suggesting that they appeal to students in similar ways—perhaps in terms of affordability and catering.

From the Data Summary of Q11 (How Far Participants Would Be Willing to Travel to Eat at Chipotle), it is clear that the closer a potential Chipotle location is to the UWG campus, the more student customers it will receive, with an on-campus location appealing to almost 100 percent of students. We also found that students who would only eat at Chipotle if it was within walking distance gave higher ratings to three other restaurants, while those participants who would be willing to drive to eat at Chipotle had a better general perception of Chipotle.

Looking at the Data Summary of Q12 (Perception of Current Chipotle Pricing), we find that 46.5 percent, less than half, of our participants Strongly Agree or Agree that Chipotle's current pricing is about right. This and the mean response of 3.28 is indicative of a lukewarm response to Chipotle's current pricing. Although this mean rating is higher for participants who had previously eaten at Chipotle, and the mean increases with the general perception of Chipotle, this low amount of approval is still a cause for worry.

The Data Summary for Q13 (Perception of Option to Spend Dining Dollars at Chipotle) shows a strong positive lean; 73.4 percent of participants Strongly Agree or Agree that they would like to have the option of spending their Dining Dollars at a nearby Chipotle. The mean value was 4.1, which we found to be significantly greater than 4.0. Blacks or African-Americans had a higher mean value than White participants. Also, participants who live on campus and Freshmen/Sophomores had higher mean values; since most Freshmen are required to live on campus and therefore more likely to depend on meal plans that include Dining Dollars, this finding makes sense.

More than half of the responses to Q15 (Perception of Effect of GMO Controversy of Wanting to Eat at Chipotle) were Neutral. Adding this to the 32.4 percent that Strongly Disagreed or Disagreed that the controversy made them not want to eat there, we can conclude that 89 percent of our sample is not affected by the controversy. Also, we determined that the mean response of 2.66 was significantly less than 3.0. This is positive, but we must also consider the 11.2 percent that indicated that they would not eat at Chipotle with knowledge of the controversy. Also, the 56.4 percent of neutral responses could be interpreted as uncertainty about the issue. These factors are certainly a cause for concern. On a more positive note, we also found that those who would eat at Chipotle fewer times (0-5) per month also gave a higher mean response for this question. We also see in the Correlation section that as the negative effect of knowledge of this controversy increases, so do the ratings for three restaurants, Chipotle not being among them. Since the questions for Times Participant Would Eat at Chipotle Per Month and Restaurant Ratings were placed before the one about the GMO controversy on our survey, we can postulate that perhaps those who were negatively affected by the controversy had a bias against Chipotle before taking our survey.

While going through our previous findings, we found some evidence that seemed to suggest that having previously eaten at Chipotle creates a strong preference for continuing to eat there. Our first indication of this was when we found that participants who had previously eaten at Chipotle not only had a better perception of Chipotle in general, but also gave higher ratings to Moe's, which serves similar food. Also, those who had not previously eaten at Chipotle gave significantly higher ratings to four other restaurants than those who had. We then discovered that participants who had heard of the GMO labelling controversy also had a better overall perception of Chipotle. If participants who had previously eaten at Chipotle also were more likely to have knowledge of the controversy, then we could conclude that those who had heard of the controversy had a better perception of Chipotle because they were more familiar with it (hence supporting the hypothesis that having eaten there previously creates a preference for it). We conducted a Chi-Square test and found that there is, in fact, a relationship between having eaten at Chipotle previously and having heard of the controversy; about 80 percent of those that were aware of the controversy also had eaten at Chipotle previously. We conducted two more Chi-Square tests and found that having eaten at Chipotle previously is also related to race and distance participants would be willing to travel to eat at Chipotle. About 70 percent of those who had eaten at Chipotle in the past also said that they would be willing to drive to Chipotle; the proportion of students who would be willing to drive to Chipotle is also about 70 percent. Also, we found in our T-Tests that Black or African-American participants had a significantly higher general perception of Chipotle than Whites; our Chi-Square test revealed that almost 70 percent of Blacks or African-Americans had eaten at Chipotle in the past, while only about 60 percent of Whites had done so. The results from our T-Tests, Correlations, Regressions, and Chi-Square analyses lead us to conclude that having previously eaten at Chipotle creates a strong preference for continuing to eat there, despite controversy.

5. Recommendations to Chipotle

Having fully analyzed our data, we make the following recommendations based on our conclusions:

Management should open a Chipotle location in Carrollton.

We would recommend a location no more than 5 minutes driving from the UWG campus, in order to attract more that 50 percent of students. Management should attempt to place a location as close to campus as possible; it will attract more student customers the closer it is to campus.

We recommend that management implement marketing strategies to combat competition from local competition, particularly Chick-Fil-A.

Considering that Chipotle has a stronger footing in the UWG African-American population, we would recommend a greater focus on winning over White students, who seem to have the most positive perception of Chick-Fil-A.

Noting that Chipotle's biggest potential competitors offer low prices, student discounts, incentives, the option to use Dining Dollars, and catering, we recommend that a potential Chipotle location find ways to offer all of these options to students.

With the strong indication that eating at Chipotle once creates a strong preference for continuing to eat there, we would advise that management, if they choose to open a location in Carrollton, hold a large "grand opening" event with significant discounts and incentives for students. This is likely to create an even stronger preference among the student body for eating at Chipotle.

Since the GMO labelling controversy turned more than 10 percent of our sample away from Chipotle, we suggest that management take marketing strategies against the GMO and more recent E. coli controversies. Also, since over 50 percent of our sample responded neutrally to the effect that the controversy had on their desire to eat at Chipotle, it is possible that the E. coli outbreak may have pushed many of our neutral responses to the negative; we therefore reinforce our stance that combative marketing strategies are necessary. (See the Limitations section for a description of the E. coli outbreak.)

Due to Chipotle's recent controversies, management may wish to consider waiting until news surrounding them has died down before opening a location in Carrollton. However, it is true that the GMO controversy had little negative effect on our population. Also, the fact that eating at Chipotle once creates a strong preference for continuing to eat there indicates that a large portion of the UWG student body is already brand-loyal to Chipotle, and that new customers are likely to become brand-loyal as well. We therefore leave the decision on this matter at management's discretion.

6. Limitations

Due to the nature of our data-gathering method—setting up a table in a high-traffic area and asking passers-by to fill out surveys—our sample is essentially a convenience sample, not a truly random sample, and hence is not as accurately representative of the population as it would be if we had created and surveyed a random group of students. For example, due to our location, we were not able to survey as many seniors as we needed to have a percentage in proportion to the actual population.

We initially set out to gather 385 surveys, because we concluded from our statistical calculations that this was the minimum number necessary to ensure that our sample percentage values differed from population values by no more than five points. However, several participants skipped or did not see some of our questions, meaning that we had less than 385 valid, fully completed surveys. Had we foreseen this possibility, we would have attempted to gather 400 or more.

Our questionnaire featured the Chipotle logo at the top of the sheet, and Chipotle was first mentioned in Question 7 of our 15-question survey, so it is possible that some bias towards Chipotle may have occurred.

At the end of October 2015, an E. coli outbreak in Washington and Oregon was traced to local Chipotle restaurants. Fifty-five people from 11 states were affected, with 40 of them being from Washington and Oregon. Interestingly, this did not come to public attention until after we had gathered our surveys, otherwise we would have surveyed for responses to the outbreak in addition to responses to the GMO labelling controversy.

In filling out Question 10 on our questionnaire (restaurant ratings with a constant sum of 100), many participants misinterpreted our instructions. Instead of putting down ten values that added up to 100, a large number gave percentage ratings for each restaurant, resulting in a sum far more than 100. When coding our data, we had to adjust these values in order to perform valid calculations. Although we are fairly certain that the adjusted values accurately represent the participants' opinions, there is still the possibility that these values are slightly off.

Question 11 on our questionnaire asks how far participants would be willing to travel to eat at a potential Chipotle location; however, we neglected to include an option for not eating at Chipotle at all, no matter how far away it was. Since responses to Question 9 showed that only 3.12 percent of our sample would eat at Chipotle zero times per month, we doubt that this oversight creates a significant issue, but we do recognize that we would have been able to make a more significant statement for Chipotle if we had gathered this data.

7. Acknowledgements

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8. References

1. Beheruz N. Sethna, “The Marketing Carnival” Decision Line 36, no. 2 (March 2005): 4-7, 14.
2. Marshala Cofer, Laney Zahner, Kaylee Bronson, Sandra Santiago, Beheruz N. Sethna, “Marketing Carnival Approach: Analysis of University Bookstore,” National Social Science Journal 45, no. 2 (March 2016): 78-91.