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Marketing to Food Insecure College Students: An Investigation into the University of
Mississippi's Food Pantry

By Dandridge Stephens Parks

A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of
the requirements of the Sally McDonnell Barksdale Honors College.

Oxford

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Abstract

College students are documented to suffer food insecurity at a high rate, and student-run food pantries have aimed to alleviate some of this burden. However, these pantries operate inefficiently and struggle to adequately meet student needs. In particular, many students are unaware of the pantry or have barriers to use. Research has found that only 14% of food insecure college students use their campus food pantries. The objective of the following work is to improve future marketing for campus run food pantries, with a specific focus on the University of Mississippi's pantry.

In the last year, the University of Mississippi's food pantry, now known as Grove Grocery, has undergone a period of growth and change. New services have been added, the leadership team has been expanded, and the pantry has fully rebranded. However, awareness of the pantry remains low. After spending a year as the pantry's marketing director, it was clear that our marketing efforts were uninformed and ineffective.

In order to gain additional insights, a cross-sectional survey was sent to Fall 2020 University of Mississippi students to collect data on food insecurity levels, demographics, awareness of the food pantry, and other relevant information. Confirming our expectations, the survey found 41.4% of the respondents food insecure, most students unaware of the pantry, and significant barriers to use, many of which could be addressed through marketing.

The results of the survey were analyzed and used to create managerial recommendations about how to optimize marketing in the coming years. This plan contains general recommendations about advertisement content and a detailed outline of steps to take to raise awareness. Ideally, future marketing directors from Grove Grocery and other campus food pantries will be able to use these recommendations and the insights from the survey to help reduce campus food insecurity.

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INTRODUCTION

Food insecurity is defined by the USDA as “a household-level economic and social condition of limited or uncertain access to adequate food” (Coleman-Jensen, Rabbitt, & Gregory, 2020). In more common terms, food insecurity is being unable to eat as much or as healthily as one needs. It is a problem across America, as the USDA noted a 10.5% food insecurity rate in 2019. In particular, impoverished households are far more likely to experience food insecurity, as 34.9% of those below the federal poverty line are food insecure. This same study found that Mississippi had an insecurity rate of 15.7%, the highest of all fifty states (Coleman-Jensen, Rabbitt, & Gregory, 2020).

The issue of food insecurity is much more prevalent on college campuses than it is in the general U.S. population. Young adults aged 18-24 experience poverty at a higher rate than any other age range (Hawkins, 2019). Additionally, 69% of students who graduated in 2016 took on debt, with an average of \$29,650 in student loans (The Institute for College Access and Success, 2019)). A large-scale study run by the Wisconsin HOPE Lab that tracked 43,000 students at 66 postsecondary institutions across the U.S. found that 36% of students were food insecure within the month leading up to the survey (Goldrick-Rab, Richardson, Schneider, Hernandez, and Cady, 2018).

For college students, food insecurity was associated with worse health and poorer academic performance (Patton-Lopez et. al, 2014). Additionally, food insecurity was inversely correlated with healthy eating on campus, healthy physical activities on campus, and meal consumption; it was also positively correlated with stress and depressed mood (Bruening et al. 2017). Among community college students, food insecure students reported lower levels of energy and concentration, with the effect becoming more pronounced as food security decreased (Maroto, 2013). Students were more likely to experience food insecurity at the end of the semester (Bruening et al. 2017).

To help combat food insecurity, many college campuses have food pantries which distribute meals and groceries to community members free of charge. However, an analysis of 34 college food pantries reported that only 14% of food insecure students actually utilized their campus pantries (Dubick, Mathews, and Cady, 2016). Research identified that around 70% of University of Florida students were aware of their campus pantry, but only 38% of food insecure students utilized it (El Zein et al, 2018). Many students are aware of the pantry but unwilling to use it. The four major barriers to use that were identified by students who participated were social stigma, insufficient information, feeling like the pantry wasn't for them, and inconvenient hours (El Zein et al, 2018). In order to increase food pantry usage, both general awareness and willingness to use must be addressed.

The University of Mississippi's student run food pantry was started in 2013 under the name The Ole Miss Food Bank. Located in Kinard Hall, The Ole Miss Food Bank contained an array of canned goods and other non-perishable items. Students, faculty, and staff could come during the week to discreetly take groceries as they needed. 2017 research conducted by Megan Eubanks found that 42.7% of undergraduate students surveyed at the University of Mississippi were food insecure, with 12.5% of those experiencing very low food security. Similarly, 36.4% of Graduate students and 15.3% of faculty qualified as food insecure. Of the 355 participants, 210 (59.2%) reported being aware of The UM Food Bank (Eubanks, 2017). Far more respondents were food insecure (42.7%) than felt that they qualified for the resource (15.8%) (Eubanks, 2017).

Recently, The Ole Miss Food Bank expanded to better cater to individuals experiencing food insecurity. It began offering services beyond a traditional food pantry, including distributing meal swipes, Grab-and-Go bags (a recipe and all the ingredients needed to make it), and allowing patrons to fill out a grocery order form. Grove Grocery began tracking outgoing meals closely in the fall of 2019. While there is not data for the full year, 105 meals were distributed per week during Fall 2019. During Fall 2020, 189 meals were distributed per week. In the

calendar year 2020, Grove Grocery distributed around 15,000 meals and nearly 800 meal swipes. However, following several years of poor marketing, The Ole Miss Food Bank's awareness was low, and thus significant barriers to use existed. Because of these factors, the pantry's executive board elected to fully rebrand in an effort to reduce stigma. Starting in the summer of 2020, the pantry became known as Grove Grocery: The UM Food Pantry. A new logo was also created to accommodate the change.

Figure 1: The two logos The University of Mississippi food pantry has used



In the spring of 2021, the pantry expanded again. The Student Veterans Association allowed Grove Grocery to use space in the George Street House to open a secondary location. The new location is a fully operational kitchen stocked with frozen meals, snacks, and ingredients. Importantly, it is conveniently located next to the library, a major improvement over the original pantry hidden in Kinard Hall.

Since the pantry is student run, the quality of leadership and amount of work done varies semester by semester. Students currently receive no compensation for their work. While there is only anecdotal evidence to support the claim, several recent marketing directors were either uninterested or overwhelmed, and, as a result, the level of promotion for the pantry the last

several years was low. Research has documented the negative effects turnover has on companies, with some estimates that it costs around half of an employee's annual salary to replace them (Johnson et al., 2000). Aside from being overworked, the marketing director only worked for one year, at which point all the know-how left with them. To combat these issues, a committee of six to seven students was created to assist the marketing director. Having younger students on the committee ideally should allow for know-how to be preserved in subsequent years.

During the fall semester, we were focused mainly on running effective social media campaigns. Several of these were donation drives, while others were based around creating awareness and interaction. At the middle of the summer, Instagram was our most active social media, and it had around 450 followers. We also met with Rebel Radio, who were a pleasure to work with, and had an ad begin running on their station. We placed a simple ad on digital sign boards in the Union and residential halls. Prior to the start of the semester, we got in touch with a number of professors and asked them to mention us in their syllabus or lectures. Due to COVID-19, we were very limited in the amount of physical advertisements we placed.

The purpose of this research is to help future food pantry leadership understand the problem of food insecurity, and give insight into the best ways to address those suffering from it. To supplement experiential knowledge, a cross-sectional survey was conducted to evaluate food insecurity, pantry awareness and use, demographic information, and a number of marketing questions. The full survey can be found in the appendix. Using analysis of the results and some experiential knowledge from former executive members, a marketing plan was developed. It contains general best practices for food pantries, as well as specific targets for the University of Mississippi.

Methods and Materials

Design and Participants

A cross-sectional, non-probability, Qualtrics survey was emailed to 5,000 University of Mississippi students in November of 2020 through the IREP. The study was approved by the Institutional Review Board of the University of Mississippi, and participants were given informed consent prior to being directed to the survey. 410 students participated in the survey. The full survey can be found in Appendix 1.

Assessment of Food Security Status

The prevalence and severity of food insecurity were assessed using the USDA U.S. Household Food Security Survey Module: Six-Item Short Form (see Appendix 3). The survey module and the associated Six-Item Food Security Scale were developed by researchers at the National Center for Health Statistics (Economic Research Service 2012). Slight modifications were made to the six-item module. First, when the original version of the module asked whether something had occurred “within the past six months,” our survey asked if something had occurred “since the beginning of the Fall 2020 semester” (the survey was distributed on November 13, 2020, near the end of the Fall 2020 semester). This was done in order to assess the food insecurity of students during the school year when they are more likely to live near the University, away from family, and use the University’s resources. Additionally, question AD1a as noted in the original version of the survey was also asked under questions AD2 and AD3, although these two additional questions were not counted towards a student’s raw score.

Demographics

The IREP automatically collected demographic information such as participant sex, race, year in college, gender, full or part time students, and Mississippi residency. Due to low responses in some categories, race was ultimately broken up into Asian, Black, White, and

Other for the purpose of data analysis. Discovering if students lived on campus was accomplished by asking “Do you live on campus”. Participants were also asked about being a first generation student (“Are you a first-generation student? *Note: A first-generation college student is defined as a student whose parent(s)/legal guardian(s) have not completed a bachelor’s degree. This means that you are the first person in your family to attend a four-year college/university to attain a bachelor’s degree”), their involvement in Greek Organizations, (“Are you involved in any of the following Greek organizations?”), whether they were international students (“Are you an international student”), and whether they had a child (“Are you a parent”). Finally, participants were asked a number of questions regarding the purchasing of food.

Marketing Variables

The survey contained a number of questions intended to gauge overall awareness of the pantry. It asked about likelihood to recommend to a friend, frequency of encountering our ads, social media use, and likelihood of pantry use. Questions were also asked about the awareness of each individual service offered by Grove Grocery.

Statistical Analysis

Chi square tests of independence were used to find significant relationships between food security score, sociodemographic characteristics, and questions regarding the pantry such as awareness, use, likelihood to recommend to a friend, advertisement encounters, and barriers to use. All data analysis was conducted in IBM SPSS. p -values smaller than 0.05 were considered significant.

Results

Population characteristics

After removing all responses that completed less than 66% of the survey or were marked as spam by Qualtrics, a sample of 321 responses was left on the emailed, cross-sectional survey. Of the valid responses, 75.2% were female, 72.4% white, and 68.3% undergraduate. A little more than half (56.8%) were Mississippi residents, and 78.6% of respondents reported living off-campus.

Table 1: Demographic data
Total count of study population: $n = 321$
Counts might not sum to 321 due to missing data

Variable	n	%
Gender		
Female	242	75.2
Male	79	24.5
Race		
Asian	25	7.8
Black	43	13.4
White	233	72.4
Hispanic	6	1.9
American Indian	2	0.6
Other	12	3.7
Student Year		
Freshman	34	10.6
Sophomore	43	13.4
Junior	52	16.1
Senior	79	24.5
Graduate	102	31.7
Place of Residence		
On-Campus	64	19.9
Off-Campus	253	78.6
Mississippi Residency		

Mississippi Resident	183	56.8
Out of State	138	42.9
Involved in Greek Life		
Yes	69	24.6
No	237	73.6
First Generation Student		
Yes	95	29.5
No	219	68

Food Security Status

Analysis of USDA U.S. Household Food Security Survey Module: Six-Item Short Form showed that 188 (58.4%) respondents experienced high or marginal food security. Of the remaining participants, 79 (24.5%) experienced low food security while 54 (16.8%) experienced very low food security.

When compared to the sociodemographic data, significant relationships were found between food security and first generation students (Chi square =15.31, $p=0.004$), self reported academic struggle (Chi Square=124.162, $p=0.000$), and having to extend time at school (Chi square= 9.613, $p=0.008$). 28.4% of first generation students reported very low food security compared to only 11.9% of non-first generation students. Low food security students were more likely to report struggling academically and having to extend time at school. Additionally, food insecurity had a significant relationship with involvement in Greek Organizations (Chi square=10.75, $p = 0.005$) with students in sororities reporting lower levels of food insecurity. Somewhat surprisingly, there was no significant relationship between food security and race, gender, Mississippi residency, or classification. This lack of relationship seems to indicate that food insecurity impacts a wide range of students. Food insecure students were more likely to self-report financial stress (Chi square= 124.2, $p = 0.0001$). On a five point scale with lower responses indicating more stress, high or marginal food security students had a mean of 3.48,

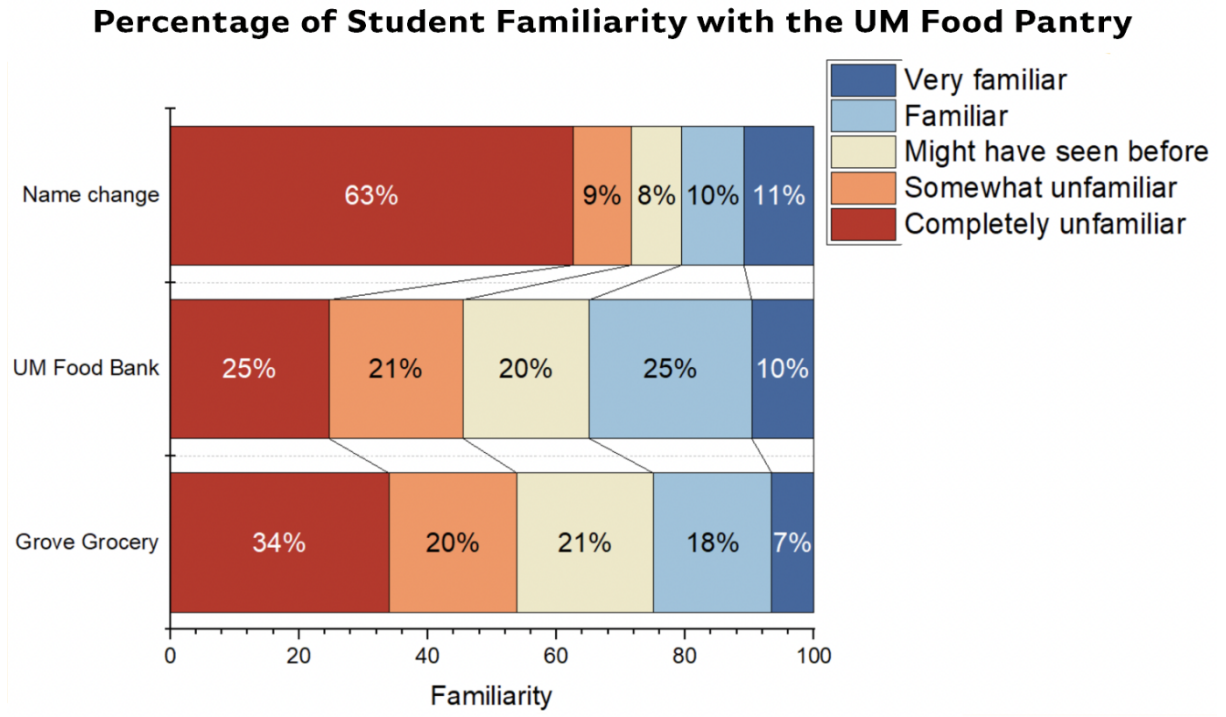
low food security students had a mean of 2.89, and very low food security students had a mean of 1.8.

Food insecurity was also significantly associated with paying for one's own educational expenses (Chi-Square = 22.545, $p = 0.004$), paying for one's own essential expenses (such as food and rent) (Chi-Square = 24.511, $p = 0.002$), and not having someone to provide financial support in an unplanned financial emergency (such as an ER visit, unexpected car repairs, job loss, etc.) (Chi-Square = 18.945, $p = 0.000$). Students that indicated that they have someone to support them in a financial emergency were prompted to name who would cover these expenses for them. Of the 217 respondents, a vast majority ($n=192$) listed their parent(s). Other common respondents included other family members, such as grandparents ($n=26$) and siblings ($n=14$).

General Awareness

The survey began with three questions to gauge awareness of the new name. Regardless which name was asked about, student awareness was low, and the majority of students reported being unfamiliar. When asked about familiarity with Grove Grocery, only 24.9% of participants claimed to be familiar or very familiar, with 33.9% claiming to be completely unfamiliar. More participants (34.9%) reported familiarity with the UM Food Bank, with only 24.6% reporting to be Completely unfamiliar. The Grove Grocery moniker had only existed for around three and a half months at the time of the survey, which might skew the data. Comparing classification to the awareness of the name change (Chi square= 27.704, $p = 0.034$) and awareness of the UM Food Bank (Chi square = 36.2, $p = 0.003$) yielded significant results. Younger students were far less familiar with the UM Food Bank than older students, as no Freshmen reported being Very Familiar compared to 14 (21.5%) of Seniors. Regardless, it is obvious that general awareness needs to be addressed thoroughly in the coming years.

Figure 2: Student Familiarity with the different names of the UM Food Pantry



Nearly two thirds (62.6%) of participants reported being “Completely Unaware” of the name change. Concerningly, adjusting for food insecurity yielded insignificant results, suggesting that food insecure students were just as ignorant about the switch as those who did not need our services.

The survey also contained a list of our services (Food Pantry, Grab and Go Bags, Meal Swipes, Hygiene Products, Cleaning Products, and Grocery Orders), and asked students both if they were familiar with the service and if they thought they knew how to use it; the results for each of these two questions were very similar. Based on the means of responses, respondents were most familiar with the pantry and meal swipes, followed by hygiene and cleaning products, with the lowest knowledge of Grocery Orders and Grab and Go bags.

Use and Barriers to Use

Only 45 participants (14%) reported having used the food pantry. Students who were classified as very food insecure also reported low rates of pantry usage, with only 22.6% of such students reporting pantry use. Despite not being correlated with food insecurity, race did have a significant relationship with reported pantry use (Chi square = 19.536, $p=0.003$). Asian (41.2%) and black (38.7%) students were far more likely to visit than white students (10.3%).

20.2% of all respondents have needed or wanted to use our services, but have not because of confusion or uncertainty. Among food insecure students, this number jumped to 51.9%. For perspective, more students who were classified as very low food security reported not using the pantry due to uncertainty than reported being unaware of the pantry. This question was unrelated to how recently a participant had seen our advertisements, suggesting our ads do a poor job alleviating confusion. International students and non-white students were also more likely to report confusion, as were students reporting higher food insecurity.

Table 2: Comparing significant results to Food insecurity
 Total count of study population: $n = 321$
 Counts might not sum to 321 due to missing data

Variable	Total n (%)	High/Marginal Food Security ($n = 188$ {58.4})	Low Food Security ($n = 79$ {24.5})	Very Low Food Security ($n = 54$ {16.8})	p - Value
Aware of Grove Grocery, n (%)					0.073
Yes	80 (24.9)	35 (18.6)	28 (28.9)	17 (31.5)	
Somewhat	68 (21.2)	40 (21.2)	13 (13.4)	15 (27.8)	
No	173 (53.9)	188 (60.1)	38 (39.2)	22 (40.7)	
Utilized Food Pantry, n (%)					0.053
Yes	45 (14)	21 (11.2)	12 (15.2)	12 (22.6)	
Maybe	9 (2.8)	3 (1.6)	5 (6.3)	1 (1.9)	
No	267 (83.2)	164 (87.2)	62 (78.5)	42 (79.2)	

Have you ever wanted or needed our services, but been unable to because of confusion <i>n</i> (%)					
Yes	65 (20.2)	15 (8.0)	22 (27.8)	28 (51.9)	0.0001
No	130 (40.5)	83 (44.1)	32 (40.5)	15 (27.8)	
N/A	126 (39.3)	90 (47.9)	25 (31.6)	11 (20.4)	
Are you struggling academically <i>n</i> (%)					
Yes, large struggle	42 (13.1)	14 (7.4)	15 (18.9)	13 (24.1)	0.0001
Some struggles	133 (41.4)	71 (37.8)	39 (49.4)	23 (42.6)	
No	146 (45.5)	103 (54.8)	25 (31.6)	18 (33.3)	

When asked if they would use Grove Grocery in a time of need, 195 participants (60.7%) said Yes and 19 (5.9%) said No. Only 4 participants (3%) in the low and very low food security groups said that they wouldn't use the pantry in a time of need. In addition, more participants reported they would visit the food pantry in a time of need if they personally knew someone who had already been (Chi square=20.629, $p=0.000$).

To help gauge stigma, we asked participants both if they would feel judged and if they would judge others for using the pantry. Only one participant said that they would judge someone a lot, while only seven (2.2%) others said they would judge people at all. The rest of the respondents reported that they would not judge others. On the other hand, 22 respondents (6.9%) said that they would feel very judged and almost half said they would feel a little judged. Students who reported feeling judged were less likely to report wanting to use the pantry in a time of need ($p=0.003$). Additionally, students who knew someone who had used the pantry were less likely to report feeling judged (Chi square 21.132, $p=0.002$). Nonwhite students were

more likely than white students to report that they would recommend the food pantry to a friend in need ($F(1, 317) = 5.13, p = .024$), as were food insecure students ($p=0.0005$).

When students did not select “Yes” on the question “Would you use Grove Grocery in a time of need?”, they were directed to a follow up question that asked to select all the reasons why. Of the 126 students who saw this question, 41 were food insecure. Their responses can be found in the following table.

Table 5: Reported reasons for not using the UM Food Pantry
Respondents were able to select multiple responses

Why would you not use the Pantry?	All respondents <i>n</i> (%)	Food insecure respondents <i>n</i> (%)
Number of responses	126	41
Embarrassment or Shame	34 (27)	13 (31.7)
Unsure of how it works	78 (61.9)	29 (70.7)
Feel like I don't qualify for the resources	78 (61.9)	24 (58.5)
Lack of transportation	8 (6.3)	4 (9.8)
I use different support resources	21 (16.7)	5 (12.2)

Of note are the 58.5% of food insecure respondents who reported feeling like they did not qualify for the resource, and the high rate of confusion among food insecure students (70.7%).

A similar question was asked later in the survey, but targeted to all participants. Among food insecure students, only lack of transportation had any correlation with likelihood of using the pantry. Students who reported that lack of transportation influenced their decision to visit the pantry were less likely to have utilized our services ($p = 0.033$). The remainder of the responses were uncorrelated with pantry usage. The three most common barriers to use were embarrassment, confusion about the service, and feeling like the resource wasn't for them. Among food insecure students, 51.9% were influenced by embarrassment, compared to 72.2% and 75.2% who were influenced by confusion and feeling like the resource wasn't for them respectively. Awareness of Grove Grocery approached a significant relationship with student

confusion (Chi square 13.8, $p = 0.086$), suggesting that many students who reported confusion as a barrier were simply unaware of the pantry at large.

Marketing

When asked “How did you first hear about Grove Grocery: The UM Food Pantry?”, 18.9% reported “social media”, 22.7% responded “from a friend”, and 23.6% responded “flyer/poster/digital sign”. 9.6% responded from a teacher, with a small number of other responses (radio, email, sorority meeting). One anonymous participant wrote in “Until I was direly in need of the resource, no one mentioned it to me. There are not many announcements for the resource, which backfires for a time like mine when I didn't even realize the resource existed and wasted time, money, strength, and was exhausted trying to make things work with no money in a small town. I don't mean to sound self-pitying, but the truth is not always pretty”. This quote clearly encapsulates the need for raising general awareness. It is perhaps most noteworthy that only 18.9% of participants reported first discovering Grove Grocery on social media. Comparing this question to classification data yielded some other pertinent findings. Of the options for first encounter, only “flyer/poster/digital sign” was significant ($p= 0.01$), with the likelihood of encountering such an advertisement increasing the longer a student was on campus.

Asking students how recently they had seen our ads also yielded several noteworthy responses. Graduate students were more likely to report never having seen an advertisement ($p=0.006$), while female students were more likely to have seen an ad in the last month ($p=0.024$). There was a consistent trend in the data that females ($p=0.031$), particularly those in sororities ($p=0.0005$), were more likely to have interacted with us on social media. This may have contributed to their increased likelihood of seeing an ad in general.

Discussion

Review of Findings

This section needs to be prefaced with the reminder that food insecurity is bad. From the survey data, food insecure students were more likely to report financial stress and academic struggles. Whether or not those affected realize it, their lives are being negatively impacted by food insecurity. This can be important to consider as one examines data on why the pantry is not used.

Using the 16.8% of our participants reporting very low food security, you can create a 95% confidence interval that between 12.7% and 20.9% of University of Mississippi students are highly food insecure. Using the 2019 enrollment figure of 22,273, this comes out to be between 2,835 and 4,660 students. Somewhat surprisingly, most demographic data was unrelated to food insecurity. Because Mississippi has such high food insecurity rates, I hypothesized that there would be more food insecurity among in-state students. Similarly, a higher rate of food insecurity was expected among minority and graduate students. This was not the case. With the exception of first-generation students and international students, demographics were not a predictor of food security status.

Generally speaking, students were unaware of the pantry. Awareness of The UM Food Bank and Grove Grocery were very similar, with most respondents reporting the same level of awareness about both. Freshman universally reported more awareness of Grove Grocery than The UM Food Bank. Graduate students were likely to never have seen an ad, which is an indicator of a demographic that has been overlooked. Advertisements on campus have been concentrated in high traffic areas for undergraduate students, and it appears that these ads have failed to reach graduate students.

As students spend more time on campus, they are more likely to encounter the food pantry. While our data did not necessarily reflect this, the name change is a major confounding variable. However, older students were more likely to have seen our ads on campus despite not living on campus, which indicates that there is certainly a time factor to awareness. Obviously, first year students have fewer chances to encounter the pantry, and fewer friends who have done the same. A substantial number of students first encountered the pantry from a friend, which suggests a compounding effect to our marketing. Similarly, students reported a higher willingness to use the pantry and lower feelings of embarrassment if they knew someone who had already been. Given the emphasis placed on the Pantry being a discreet service, the amount of word of mouth exposure is surprising.

When asked if they would use the pantry in a time of need, only 4 food insecure respondents said No. However, just 24 of them had actually used the pantry. Of a sample of 133 students, 129 claimed they would use the pantry in a time of need and only 24 actually did. That is a gap of 105 students. Clearly, there is a large set of students who are potential beneficiaries of the pantry that do not feel as though they qualify for the resource. General awareness is a glaring issue, but it is much easier to address. The bigger challenge is to convince students that this is a resource for them to utilize.

Anecdotally, I have a close friend who routinely skipped meals and ate unhealthily because he could not afford food. He often joked about having vyvanse for lunch because he took it to suppress his appetite. He knew I worked closely with the pantry and had several conversations with me about it. But until I pointed out that he clearly could use the support, it did not occur to him to use our resources. Similarly, I had other friends ask me about the -homeless students I worked with. They thought the pantry existed to help aid homeless students. I let them know that, to my knowledge, we didn't have any homeless patrons and that we actually existed for all students. They immediately responded by discussing a friend who needed the resources, but hadn't known about it. Their friend was unaware of the pantry. But

he would have been able to receive help far sooner if his friends had really understood what the pantry was for. It is hard to overemphasize the importance of making students understand that this resource is for them. Particularly with the opening of the kitchen at the George Street House, students can use Grove Grocery as a main source of food, or just a supplementary resource.

One takeaway that seems consistent across all of the survey data recovered is that social media had been a relatively ineffective tool for reaching food insecure students who are otherwise unaware of Grove Grocery. While it is likely that our reduced social media presence in the previous years resulted in minimal exposure, it seems significant that the likelihood of encountering physical ads went up as time on campus went on, but social media encounters did not. Particularly considering the COVID-19 restrictions on in person gatherings and our high focus on social media marketing, it is surprising to note that traditional marketing methods were still responsible for most first interactions. Similarly, the biggest demographic that reported encountering our social media was women in Greek life, a demographic that is noted for low prevalence of food insecurity. While no survey data exists about the efficacy of our more recent social media habits, it is clear that maintaining a functional, but otherwise inactive, social media failed to inform new students of our services. By increasing interaction on our social media, promoting a select number of posts, and creating engaging content, social media can be an effective tool to attract otherwise unaware individuals. Since the survey was sent, Instagram follower count has continued to increase and engagement has risen, so it stands to reason that student encounters on social media are also increasing.

Despite white and non-white undergraduates reporting similar levels of food insecurity, white students were less likely to have been to the pantry. There was no significant difference in the reported barriers to the pantry. This discrepancy could be explained by a number of factors. Minority students were significantly more likely to be familiar with the UM Food Bank, although not with Grove Grocery. It is possible that these students experienced food insecurity in the

past and visited the pantry, but at the time of our survey, were not food insecure. There might be an increased stigma for white students that our survey failed to capture. It could also be explained by minority students being more likely to tell their friends about the pantry. Students who knew someone that had used the pantry were more likely to be willing to use it. It is possible that non-white students are more aware of their friends' use of the pantry, which destigmatizes it, while white students are more likely to keep their pantry visits private. Similarly, other research notes that white Americans are more individualistic compared to other ethnic groups (Acevedo, 2003). The same study notes that in particular, black college students have been found to be significantly more collectivist, which might explain both the willingness to use the pantry and to tell others about it.

Limitations

There were many limiting factors for this research. One potential variable that could skew both the data and my personal experience is COVID-19. The coronavirus lockdowns changed the way we interacted and majorly impacted many's finances. It is possible that some components of this research are not generally true, and were a byproduct of the lockdowns.

The survey data contains a number of limitations. First, it is possible that by asking our population to assist in research for the food pantry, we attracted certain people. Our data could be skewed towards those who were aware of the pantry and wanted to help, or those who were unaware of the pantry and wanted to find out more. In addition, the length of the survey may have impacted the results. We failed to insert a question late in the survey that tracked engagement, and some individuals may have quit reading the questions to finish faster. Also, because we removed all responses with less than 66% completion, it is possible that busier students gave up part of the way through the survey. There were also a number of questions that were very similar, and could have contributed to survey fatigue. It has also been found that

students experience greater food insecurity later in the semester (Bruening et al. 2017), so the timing of the survey could have inflated food insecurity responses.

The survey itself also could have been improved. Many questions were not sensitive to time, and it made it hard to track certain information accurately. For example, we should have asked “Prior to the start of this year, were you aware of the UM Food Pantry” so we would have a better understanding of student awareness before and after the name change. In addition, the USDA U.S. Household Food Security Survey Module: Six-Item Short Form was only for tracking food insecurity in the short term. We had no questions pertaining to past food insecurity, which limited our understanding of food insecurity and our effectiveness in combating it. Similarly, we only asked participants if they had visited the pantry, so there is no way of knowing when this visit occurred. Trying to use this data to make generalizations about marketing was difficult because of the time ambiguity.

It is also possible that some questions primed respondents to answer certain questions in another way. Asking participants to note the ways they were struggling financially might have led to differences in self reported academic struggle.

Finally, Grove Grocery itself has gone through a very tumultuous period. COVID-19 increased demand and a number of services were created or changed to meet it. The pantry fully rebranded. The executive board was expanded from a dozen people to around forty students. A secondary location was opened. All these things combined to create a chaotic year that could have majorly impacted the survey. Additionally, because so much of the change is so recent, it is possible that some perceived best practices will be ineffective moving forward.

Future Research

Conducting similar research in two years would be interesting. It would create a point of reference for analysis, and it would help better analyze familiarity with Grove Grocery. If the same advertisement strategy was carried out over several years, it would be much easier to

judge the effectiveness of it. Looking at trends in how students heard about the pantry would be far more meaningful if the same plan was executed, and it would be easier to find blindspots in the advertisements.

If this research were rerun in the future, asking about the different social media platforms might give insightful information. Additionally, it might be wise to ask if participants have ever volunteered or their willingness to do so. Understanding the spending habits of students could also be valuable information. Other questions to add to the survey would be explicitly asking students if they felt a barrier to use, the percentage of one's food from the pantry, the degree of financial independence, and do you think you are food insecure. Research also could be conducted on faculty and staff, as there was no data acquired from them.

Obviously, this research needs to be conducted at other Institutions. Each University is different, and different approaches would work better at different schools. However, there still might be overarching trends that could aid in future marketing.

Managerial Recommendations

The purpose of these managerial recommendations is to maximize the effectiveness of Grove Grocery's marketing. To accomplish this, two elements are discussed. The first section is focused on the thematic component of the marketing. It contains advice on how to most effectively target the ads, and the general content that should be included. The second section is a series of concrete recommendations that create a general guideline of how to proceed. It includes the tasks that should be undertaken and a rough guideline of when to focus on each one. The second section is a technical overview of what the job should look like, while the first section provides insight on how to make sure that work reaches the highest number of potential patrons. While this order may seem backwards, finding channels to inform students is more straightforward than creating effective messages for those channels. It should be noted that

these recommendations are focused solely on attracting patrons, and are not intended to provide insights into fundraising or volunteer recruitment.

Branding guidelines and general strategy

It is important to note the wide range of students who qualify as food insecure. There is not one specific demographic to hone in on. For example, first-generation students and international students are each groups that are more likely to be food insecure, but first-gen students are a relatively large segment of the population that do not share any specific characteristics as a group. At the time of this writing, there weren't any easy channels through which to access all these students easily, but several offices have affinity groups in the works. Targeting international students through the Office of International Programs or other similar resources might be effective, but that is a small population segment. To maximize the effectiveness of time and resources, a broad approach should be taken, with the exception of targeting first year students (both Grad and Undergrad). Unfortunately, given the limited resources available, it is challenging to effectively reach such a large population.

One major way that marketing could be improved is through administrative support. As of November 2020, awareness of Grove Grocery was very low. Most students had never encountered it. By using official University channels, an ad could be sent to every student, faculty and staff. In addition, physical ads could be displayed in more places including buses, trash cans, the Student Health Center, and placing yard signs across campus. By working more closely with the university, it would also make it easier to get in touch with many of the people and organizations that Grove Grocery needs to work with. Continued efforts should be made to the University in an attempt to garner more administrative attention.

Realistically, without administrative support, students are unlikely to encounter ads in more than one or two places if they do not see us on social media. Because student exposure

is so low and students see so few ads, the ones that they see need to be extremely impactful. The main barriers to use students identified were embarrassment, feeling like the resource wasn't for them, and confusion about the service. Ideally, a great ad will address these components in a way that is visually engaging and not overwhelming. Properly educating someone about our services takes a lot of information. They have to know about the number of different options available, which one best meets their needs, where to find them, how to access them, and details about how they work. In a limited ad space, conveying this much information is ineffective. Ads that are full of information regarding the pantry are going to be too long to properly address the other two barriers.

One potential workaround for this would be to create a detailed, overarching, visually appealing infographic to display on the website. This webpage could also contain an informative video that further outlines Grove Grocery's services and how to use them. It could also include a chart that highlights the pros and cons of each of our services, and the best times to use them. The point of this page would be a comprehensive, one click way for students to find out everything they need to know about how to use our service. Ads could then have a QR code or link that directs to the necessary information. With less focus dedicated to explaining the services, the ads could then be focused on breaking down barriers to use. In the past, only one ad has been shown on the digital signs across campus each semester. Rotating ads through the signboards more frequently will help create more ads that students see. Assuming the website is updated to include all the relevant information, the focus of these ads could shift to attracting students.

Ad Content

There are a number of ways to make the ads more compelling to students including featuring people in the ads, emphasizing that the pantry meets a variety of needs, creating more awareness about food insecurity, using the pros current patrons report, and pointing out the

financial aid the pantry can be. These components each contain components that can attract otherwise uninterested students.

Using students in the ads helps to normalize pantry use. One of the best ways to combat embarrassment is through showing students the many people who already use the pantry. While getting patrons to consent to appear in ads might not be practical, using members of Grove Grocery's leadership team can accomplish this goal. If a student knew someone that used the pantry, they felt less judged on average, and were more likely to report a willingness to use the pantry. Most people don't realize that hundreds of students take advantage of the pantry, and pointing this out will help alleviate embarrassment and create empathy. Ads could also be run that encourage people to tell their friends about the pantry, which would increase awareness while simultaneously breaking down barriers to use. Simply pointing out the prevalence of food insecurity on campus is a majorly effective tool to use.

A major issue the survey revealed was the high number of food insecure students who did not think they qualified for the pantry. When students are sick, they know to go to a doctor. However, when students are suffering from food insecurity, they normally have no experience with the symptoms or the cure. The prevalence of food insecurity and the negative impact it has on students can be used to generate more demand. Showing students that they are, in fact, food insecure might lead them to taking steps to overcome the issue. Make sure it is understood that having to skip a meal or eat an unhealthy diet is enough to qualify you as food insecure. An effective ad that was used in the past depicted a loaf of bread that had the days of the week underneath. The slices got smaller each day, and by the end of the week there was only the outline of a slice with the caption "Food runs out. We can help". Similar ads would help students realize that the pantry is for them. Additionally, incorporate things that are markers of food insecurity that students might be unaware of, such as a reliance on Ramen or other similar foods. By pointing out the symptoms of food insecurity, it might lead students to realize they would want help.

Students have a variety of needs for the pantry. One of the driving forces behind the name change was the stigma surrounding food pantries. A closet full of canned goods does not appeal to most college students, particularly those who are generally able to afford food. Grove Grocery offers a wide array of services specifically designed to meet the needs of every student, whether that is a main source of food, an occasional dinner at the Kitchen, or hygiene products. Create ads that address students whose need might not be as severe. Lines similar to “Whether you need just a few extra meal swipes or a cart full of groceries, We are here to help” can accomplish this.

Another way to create compelling ads is by appealing to students' finances. Financial struggles are the main force behind food insecurity, and students are more likely to recognize their own financial problem than the resulting food insecurity. Ads can include components similar to “Waiting on the end of the month to come so you can get groceries? Let us help”. Students often run out of meal swipes and flex at the end of semesters, and this opens the door for a potential campaign targeting that.

When asked what they like about the pantry, patrons' responses typically included these words: convenient, free, discreet, accessible, accommodating, quick, easy, comfortable. Since current users list them as the advantages of the pantry, use these words to help attract new patrons. If a student is asked if they would use the food pantry, they might say no because they are unaware of what exactly that means. But if a student is asked if they would like a free, convenient way to get food, they will be more interested. All told, ads should try to be concise and focus on attracting, and not informing.

In order for this strategy to work, all of the necessary information needs to be very readily available. Grove Grocery's website is currently unattractive. All of the information is there, but is not presented in an attractive, concise, intuitive manner. The importance of a good website for retail sales is well documented (Zhou et al.2009), and it stands to reason that this effect would extend to us. The University IT department is a limiting factor. There are not many

options for customization and fluidity with the University's provided templates and themes. If an opportunity to update the website becomes available, it would be worth paying a reasonable price. The appearance of our website might cause some users to give up on looking for the information that they need.

Similarly, creating a strong brand kit makes for more recognizable advertisements. Our current selection of fonts and colors is adequate, but could certainly be improved upon. Having a cohesive feel to our website and marketing materials would help with brand recognition and visibility on campus. Once a strong brand kit has been developed, it should ideally carry over year to year to help keep marketing consistent.

Social Media

While describing social media best practices seems pointless because they become outdated so quickly, there are some general notes that seem relevant enough to include. Using raffles was an effective and relatively inexpensive tool to gain Instagram followers and increase engagement. In the fall, Grove Grocery posted three raffles which gained 88 new followers. Webb Lewis, the University of Mississippi's lead social media manager, gave some advice to maximize the effectiveness of our social media. Posting photos of people whenever possible, minimizing the amount of text on any photo posted, and posting frequently were some of the most important practices given. Each of these recommendations helps improve the content of posts, and is also currently more favorable in the Instagram algorithm.

More relevant to a long-term plan was his discussion of how many similar institutions (such as some of the University resources Webb managed) were deleting their Twitter accounts. Twitter is a difficult place to market, and having inactive accounts doesn't help with informing patrons. In discussing Grove Grocery's specific account, he advised tweeting and retweeting with greater frequency, but to consider shutting down the account in the future. He also recommended making the Facebook account slightly more focused on donor and parent support while still keeping it student oriented. The Instagram account is currently the most used

account, with the follower count increasing from around 450 to around 1,100 in the span of eight months. Twitter has the potential to be an effective marketing tool, but needs dedicated focus to be successful. If in subsequent years, adequate attention cannot be given to it, deactivating the account will be more beneficial.

In particular, using promoted posts and placing advertisements on Snapchat is a relatively cost effective way to spread general awareness. As of the time of this writing, Grove Grocery is fortunate enough to have a large amount of money at its disposal. It is also my opinion that our campus food pantry, assuming it maintains its high quality of work, will never be financially limited. Any time that money is not sufficient to operate, donors will have incentive to step in. Because of these factors and the potential to inform new patrons, spending money on social media should be a part of marketing moving forward. Recently, a promotional video for the George St. Kitchen was released and subsequently promoted. Over 4,500 accounts were exposed, 84% of which were not following us. The \$25 dollar promotion created a boosted amount of exposure, which aided the introduction of a new facility. By strategically promoting high quality posts, engagement will be raised for other posts and new users can be reached.

An Overview of the Operational Component

As each new director takes over in the summer, they should assemble their committee and assign tentative roles. Even though far fewer students are in Oxford, there is still work to be done. Failing to utilize the summer to prepare will make it nearly impossible to execute effectively in the fall. Beginning the fall semester off well is important, as thousands of new students come on campus and many older students return in different financial situations than they were previously. Create a strong push for general awareness through social media, physical ads on campus, teachers and tabling. As the semester progresses, students become less food secure. A strong initial focus on general awareness at the beginning of the semester sets up a later focus on students who are becoming more food insecure.

If possible, a committee approach should be taken to the marketing team. In the past several years, the role of marketing fell solely on one or two individuals. There was not enough manpower to properly market as much as was needed. A committee allows for more output and greater flexibility. A diverse team, both in age and sociodemographic factors should be employed. Having younger students on the team to develop skills, knowledge, and experience will be invaluable once the current leadership graduates. Older students, on the other hand, may have more marketing experience and knowledge which will allow them to create more professional graphics. Furthermore, the committee could benefit from a more organized and deliberate distribution of work. For example, specific roles could be assigned to each member.

One of the issues at the beginning of the year was that the committee was inexperienced making social media graphics in Canva. In hindsight, setting aside time to train and learn the program would have been an efficient use of time. A brief training session would not only make learning the program easier, it would also help to create a cohesive brand feel by introducing new members to brand fonts and colors. It might also be prudent to recruit students who have experience with higher level graphic design or marketing classes. Reaching out to professors of graphic design classes to ask them to incorporate a Grove Grocery homework design might actually have great results.

The following section is a chronological list of components of marketing that have been used in the past. It should serve as a guideline for marketing to students, and help prevent missed opportunities by pointing out relevant information.

In the summer, once the committee has been established, it is important to begin working. Throughout the summer, continue posting on social media, although with less frequency than spring and fall. There are fewer students around and less activity to post about, but posting is still important. Get in touch with orientation leaders. While incoming students are overwhelmed with information, having the pantry acknowledged is still a good first contact. Because the beginning of school is so chaotic, it is necessary to reach out to many people and

organizations during the summer so they have time to prepare. In particular, student housing is an obvious target of marketing. Reach out to try to have Resident hall leaders pass information on to students. Most halls have a Resident Assistant who gives an overview of living to students. Tell the leaders of each dorm to make RAs mention us during their introduction and refer students to us as needed. Flyers should also be put up in the dorms wherever they are allowed.

Reach out early with ads to place on the digital sign boards. Unfortunately, across campus each digital sign is controlled separately, which means you have to reach out to numerous people to get your ad displayed. The buildings that are most important to target are student housing, the Union, Dining facilities, graduate school buildings, Martindale, and SCRC. A contact list will be present in the Grove Grocery Google folder which contains many of the necessary points of contact, but it is omitted from this research due to privacy concerns. There are other important institutions to get in contact with. The Graduate Student Office and International Student Office are both points of contact for several important demographics. Student Counseling Center and Student Health Services each encounter many students who could benefit from our services, so ensure that they inform students about us. The department of student affairs has a [list of organizations](#) that could be useful (<https://studentaffairs.olemiss.edu/organization-chart/>).

Another thing to do during the summer is contacting teachers, particularly those in large classes such as EDHE, Writing 101, and other introductory courses. Ask teachers to mention us in their syllabi or read a short description of GG's services. Additionally, record an explanatory video to be played during class and, in some cases, request to come and give a short presentation. Teachers are a valuable resource, and creating a dedicated way to contact them would be beneficial in the long run. Similarly, reaching out to advisors at both the graduate and Undergraduate level might serve as an effective contact point for students.

As classes begin and students return to Oxford en masse, ramp up social media marketing. Raffle a relatively large giftcard to a popular bar or restaurant around syllabus week. If possible, advertise the raffle in freshmen housing to try to start building a social media presence among freshmen. Run a competition between Greek Houses on social media shortly after bid day. Note that students in Greek Organizations are less likely to report food insecurity, but are easier to spread information to. By getting them to repost our graphics, the non-greek students are exposed to our content. It is worth pointing out that raffles and, even more so, competitions have diminishing returns if posted too frequently.

Also keep in mind that many students at the start of the year have entirely no idea about the pantry. While ads should still try to keep the general mold of content that is discussed in the Branding guidelines section, creating some awareness about the specific services offered is an important step in exposing students. However, students report lower food security at the end of semesters. For this reason, as the semester progresses, the focus of advertising should shift to create more of an emphasis on targeting students whose access to food might be decreasing. As students run out of meal swipes and flex, more targeted ads will result in attracting more patrons. After the first four or five weeks of a semester, running ads about general awareness is probably not the most effective strategy.

Throughout the Fall and Spring semesters, there are a number of ways to maintain social media posting without having to create actual advertisements. These can be less polished than targeted advertisements or announcements, and are an easy way to gain followers and build engagement. Making a Volunteer of the month post not only rewards a hard worker, but also creates an opportunity for them to repost it. It also brings attention to the ability to volunteer. Furthermore, this gives us an opportunity to post a picture of someone, which in and of itself creates engagement. Posting shoutouts to the leadership team has a similar effect. They repost to their story and all their followers get exposed to the post. Making cooking videos to post on the story is also a relatively easy way to have good content.

There are other methods of outreach to utilize throughout both semesters. Rebel Radio is happy to run ads for us, and a number of those surveyed reported hearing these ads. Making Grove Grocery T-shirts is also useful. Traditionally, all the members of the leadership team get a shirt for free. Extra shirts can be given to volunteers, raffled, or sold. They also work as a form of advertising as people wear them. Additionally, having a few students sit at a table in front of the Union or in other high traffic areas to talk with students (commonly referred to as tabling) is a great way to facilitate face to face discussions about the pantry. Tabling can also be done at large apartment complexes. There are also a variety of news outlets that will run stories frequently about the pantry. Working with them by doing interviews and sending updates is another source of exposure.

In closing, it needs to be said that this list could be flawed, and constant self-evaluation needs to take place as these new (and old) marketing strategies are employed. This research was not all encompassing, and therefore shouldn't be taken as a strict set of rules, but rather as a general guideline to help an inexperienced marketing team. I hope that this research eases the difficulties of a college student trying to undertake such an intimidating task, and more importantly, helps reduce the impact of food insecurity.

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Appendix

Appendix A: Consent to Participate in Research

Appendix B: Copy of the Survey

Appendix C: [Food pantry mission and goals document](#)

Appendix D: [Copy of original USDA six-item module](#)

Appendix A: Consent to Participate in Research

Study Title: Food Insecurity

Key Information for You to Consider

- **Voluntary Consent.** You are being asked to volunteer for a research study. It is up to you whether you choose to participate or not. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate or discontinue participation.
- **Purpose.** The purpose of this research is to analyze the degree of food insecurity on the University of Mississippi's campus and to measure how effective campus resources are at combating food insecurity.
- **Duration.** It is expected that your participation will last 12-20 minutes.
- **Incentives.** **The first 200 people who complete the survey will receive a \$5 gift card.**

- **Risks and Benefits.** There are no anticipated risks from participating in this study. You should not expect benefits from participating in this study. However, you might experience satisfaction from contributing to fighting food insecurity.

- **Confidentiality.** All information in the study will be collected from you anonymously: it will not be possible for anyone, even the researchers, to associate you with your responses.

What you will do for this study

If you participate, you will fill out a survey asking about your experience with food insecurity, which takes about 15 minutes. The survey will not ask for your name or other identifying language.

IRB Approval

This study has been reviewed by The University of Mississippi's Institutional Review Board (IRB). If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482 or irb@olemiss.edu.

By continuing with this survey, I acknowledge my consent for participating.

APPENDIX B: The Survey

Start of Block: legality Q's

Q2 Are you over 18?

- Yes (1)
- No (2)

Skip To: End of Survey If Are you over 18? = No

Q3 Are you a student at the University of Mississippi?

- Yes (1)
- No (2)

Skip To: End of Survey If Are you a student at the University of Mississippi? = No
End of Block: legality Q's

Start of Block: Awareness

Q4 How familiar are you with Grove Grocery: The UM Food Pantry?

- Very familiar (1)
- Familiar (2)
- Might have seen before (3)
- Somewhat unfamiliar (4)
- Completely unfamiliar (5)

Q5 How familiar are you with the UM Food Bank?

- Very familiar (1)
- Familiar (2)
- Might have seen before (3)
- Somewhat unfamiliar (4)
- Completely unfamiliar (5)

Page
Break

Q6 How aware were you that the UM Food Bank changed its name to Grove Grocery: The UM Food Pantry?

Food Pantry (1)	•			
Grab and Go Bags (2)	•			
Meal swipes (3)	•			
Hygiene Products (4)	•			
Cleaning Products (5)	•			
Grocery Order Form (6)	•			

Q10 Have you ever encountered @Grovegrocery or @olemissfoodbank on social media?

- Yes (1)
- Maybe (2)
- No (3)

Skip To: Q12 If Have you ever encountered @Grovegrocery or @olemissfoodbank on social media? != Yes

Q11 How did you initially encounter @Grovegrocery or @olemissfoodbank on social media? Select all that apply.

- Saw in feed (1)
- about us (2)
- Friend posted
- From a raffle (3)
- Searched for it (4)
- Not sure (5)
- Other. Please fill in below (6) _____

Q12 How did you first hear about Grove Grocery: The UM Food Pantry?

- Social Media (1)
- From a friend (2)

- In the last month (2)
- In the last 2 months (3)
- At some point (4)
- Never (5)

Q17 Would you recommend a friend to use Grove Grocery if they were experiencing food insecurity?

- Definitely yes (1)
- Probably yes (2)
- Might or might not (3)
- Probably not (4)
- Definitely not (5)

Q18 Do you know where the Food Pantry is located?

- Definitely yes (1)
- Probably yes (2)
- Might or might not (3)
- Probably not (4)
- Definitely not (5)

End of Block: Awareness

Start of Block: Usage

Q19 Have you ever been to Grove Grocery: The UM Food Pantry, formerly known as the UM Food Bank?

- Yes (1)
- Maybe (2)
- No (3)

Skip To: Q21 If Have you ever been to Grove Grocery: The UM Food Pantry, formerly known as the UM Food Bank?
= Yes

Page	
Break	

Q20 How many times have you used the following services/items from Grove Grocery: The UM Food Pantry?

	0 (1)	1-3 (2)	4-9 (3)	10 or more (4)
Food Pantry (1)	•			

Hygiene products (2)	•			
Cleaning products (3)	•			
Grocery Order Form (4)	•			
Grab and Go Bags (5)	•			

Page Break

Q21 Would you use Grove Grocery: The UM Food Pantry in a time of need?

- Yes (1)
- Maybe (2)
- No (3)

Skip To: Q23 If Would you use Grove Grocery: The UM Food Pantry in a time of need? = Yes

Q22 Why would you not use the Grove Grocery: The UM Food Pantry? Please select all that apply.

- Embarrassment or shame (1)
- works (2)
- resources (3)
- Lack of transportation (4)
- I use different support resources (5)
- Other (7)
- Unsure of how it
- Feel like I don't qualify for the

Page Break

Q23 Would you ever judge or look down on someone who uses Grove Grocery: The UM Food Pantry?

- I would judge them a lot (1)
- I would judge them a little (2)
- I would not judge them at all (3)
- Unsure (4)

Q24 Would you personally feel judged or embarrassed to use Grove Grocery: The UM Food Pantry?

- Very judged (1)
- A little judged (2)
- Not at all judged (3)
- Unsure (4)

Q25 To what extent would each of the following reasons influence your decision to use or not use Grove Grocery: The UM Food Pantry?

	No Influence (1)	Almost no influence (2)	Somewhat influence (3)	Influence (4)	Strong influence (5)
Embarrassment or Shame (1)	•				
Unsure of How it Works (2)	•				
I Feel Like I Don't Qualify for the Resources (3)	•				
Lack of Transportation (4)	•				
Other Support Resources are Available (5)	•				

Page Break

Q26 Do you have a meal plan on campus?

- Yes. Please enter your plan (1)
- No (2)

Skip To: End of Block If Do you have a meal plan on campus? = No

Page Break

Q27 Thinking about my meal plan this semester, I would say:

- I need many more meal swipes (1)
- I need a few more meal swipes (8)
- I have the right amount of meal swipes (3)
- I have a few extra meal swipes (4)
- I have many extra meal swipes (5)

End of Block: Usage

Start of Block: Food Insecurity Survey

Q28 These next questions are about the food eaten in your household **since the beginning of the Fall 2020 semester** and whether you were able to afford the food you need.

Q29 "The food that I bought just didn't last, and I didn't have money to get more." Has that been often, sometimes, or never true for you since the beginning of the Fall 2020 semester?"

- Often true (1)
- Sometimes true (2)
- Never true (3)
- Don't know (4)

Q30 "I couldn't afford to eat balanced meals." Has that been often, sometimes, or never true for you since the beginning of the Fall 2020 semester?"

- Often true (1)
- Sometimes true (2)
- Never true (3)
- Don't know (4)

Page Break

Q32 Since the beginning of the Fall 2020 semester, have you ever cut the size of your meals or skipped meals because there wasn't enough money for food?

- Yes (1)
- No (2)
- Don't know (3)

Skip To: Q34 If Since the beginning of the Fall 2020 semester, have you ever cut the size of your meals or skippe... != Yes

Q73 How often did you cut the size of your meals or skip meals because there wasn't enough money for food—almost every week, some weeks but not every week, or in only 1 or 2 weeks?

- Almost every week (1)
- Some weeks but not every week (2)
- Only 1 or 2 weeks (3)

Page	
Break	

Q34 Since the beginning of the Fall 2020 semester, have you ever eaten less than you felt you should because there wasn't enough money for food?

- Yes (1)
- No (2)
- Don't know (3)

Skip To: Q35 If Since the beginning of the Fall 2020 semester, have you ever eaten less than you felt you should... != Yes

Q74 How often did you eat less than you felt you should because there wasn't enough money for food—almost every week, some weeks but not every week, or in only 1 or 2 weeks?

- Almost every week (1)
- Some weeks but not every week (2)
- Only 1 or 2 weeks (3)

Page	
Break	

Q35 Since the beginning of the Fall 2020 semester, have you ever been hungry but didn't eat because there wasn't enough money for food?

- Yes (1)
- No (2)
- Don't know (3)

Skip To: End of Block If Since the beginning of the Fall 2020 semester, have you ever been hungry but didn't eat because t... != Yes

Q75 How often were you hungry but didn't eat because there wasn't enough money for food—almost every week, some weeks but not every week, or in only 1 or 2 weeks?

- Almost every week (1)
- Some weeks but not every week (2)
- Only 1 or 2 weeks (3)

End of Block: Food Insecurity Survey

Start of Block: Impact of Hunger

Q36 Have you had to extend your time as a student at Ole Miss longer than you initially expected? If so, by how many semesters?

- Yes (please specify the number of semesters; ex: 1 for one semester)
(1) _____
- No (2)

Q37 To what extent did the following factors contribute to you extending your time as a student?

	Not applicable (I don't experience this) (1)	No impact (I experience this, but it doesn't impact my time as a student) (2)	Minor impact (3)	Moderate impact (4)	Major impact (5)
Financial insecurity (1)	•				
Food insecurity (2)	•				
Mental illness (3)	•				
Grades (4)	•				
Illness/injury (5)	•				
Family problems (6)	•				
Legal issues (7)	•				
Uncertainty about future/career path (8)	•				

Had to get a job/work too many hours (9)	•				
Other (please specify) (10)	•				

Page	
Break	



Q38 What is your current GPA?

Q39 Do you feel like you are struggling academically?

- Yes, I am struggling a lot (1)
- Yes, I am struggling a little (2)
- No, I am not struggling (3)

Skip To: Q41 If Do you feel like you are struggling academically? = No, I am not struggling

Q40 To what extent did the following factors contribute to your academic struggle?

	Not applicable (I don't experience this) (1)	No impact (I experience this, but it doesn't impact my time as a student) (2)	Minor impact (3)	Moderate impact (4)	Major impact (5)
Financial insecurity (1)	•				
Food insecurity (2)	•				
Mental illness (3)	•				
Grades (4)	•				
Illness/injury (5)	•				
Family problems (6)	•				

Legal issues (7)	•				
Uncertainty about future/career path (8)	•				
Had to get a job/work too many hours (9)	•				
Other (please specify) (10)	•				

Page Break

Q41 During your time at Ole Miss, have you had to get a job (or more than one job) in order to pay for essential items, such as tuition, food, and rent (i.e., not for spending money)?

- Yes, I currently have a job in order to pay for essential items (1)
- Yes, I've had a job in the past in order to pay for essential items (2)
- No (3)
- Don't know or prefer not to answer (4)

Skip To: End of Block If During your time at Ole Miss, have you had to get a job (or more than one job) in order to pay fo... = No

Skip To: End of Block If During your time at Ole Miss, have you had to get a job (or more than one job) in order to pay fo... = Don't know or prefer not to answer

Page Break

Q42 Do any of the following statements apply to you? Select all that apply.

- I am unable to get an unpaid internship because I need a paid job (1)
- I don't have enough time to focus on my schoolwork because I need a paid job (2)
- I don't have enough time to get involved on campus or in the community because I need a paid job (3)
- I can't afford to get involved in campus activities (such as Greek life) because they are too expensive (4)
- Other (please specify) (5)
- None of these apply to me (6)

End of Block: Impact of Hunger

Start of Block: Finances

Q43 How would you describe your financial situation right now?

- (4) Always stressful
- Often stressful (5)
- Sometimes stressful (6)
- Rarely stressful (7)
- Never stressful (8)

Page Break

Q44 How much of your educational expenses (tuition, books, etc.) do **you** pay for?

- All (1)
- More than half (2)
- About half (6)
- Less than half (3)
- Nothing (4)

Skip To: Q46 If How much of your educational expenses (tuition, books, etc.) do you pay? = All

Page Break

Q45 How else do you pay for your educational expenses? Select all that apply

- Family resources (parent/guardian, relative, spouse, etc.) (1)
- Aid that must be repaid (loans) (2)
- Aid that does not need to be repaid (grants, scholarships, military, etc.) (3)
- Other (please specify) (4) _____

Page Break

Q46 How much of your essential expenses (food, utilities, rent, etc.) do **you** pay for?

- All (1)

- More than half (4)
- About half (5)
- Less than half (6)
- Nothing (7)

Skip To: End of Block If How much of your essential expenses (food, utilities, rent, etc.) do you pay for? = All

Page	
Break	

Q47 How else do you pay for your essential expenses? Select all that apply.

- Family resources (parent/guardian, relative, spouse, etc.) (1)
- Aid that must be repaid (loans) (4)
- Aid that does not need to be repaid (grants, scholarships, military, etc.) (5)
- Other (please specify) (6) _____

End of Block: Finances

Start of Block: Financial emergency

Q48 In an unplanned financial emergency, (such as an ER visit, unexpected car repairs, job loss, etc.) do you have someone who could help you cover expenses (such as a parent or friend)?

- Yes (3)
- No (4)

Skip To: End of Block If In an unplanned financial emergency, (such as an ER visit, unexpected car repairs, job loss, etc.... = No

Q49 What would this person be able to help you pay for?

- Cost of the emergency itself (1)
- Cost of everyday expenses (such as food and utilities) until I get back on my feet (2)
- Cost of the both the emergency and everyday expenses (3)

Page	
Break	

Q50 If you feel comfortable, please say who would help you cover expenses. Examples include a partner, best friend, religious group, parents, grandparents, siblings, etc.

End of Block: Financial emergency

Start of Block: Demographic Questions

Q76 What type of student are you?

- Freshman (1)
- Sophomore (2)
- Junior (3)
- Senior (4)
- Graduate student (5)
- Other (please specify) (6) _____

Skip To: Q63 If What type of student are you? != Graduate student

Q54 What type of graduate program are you in?

- Masters (1)
- Doctorate (2)
- Ed.S. (3)

Q55 Do you have an assistantship?

- Yes (1)
- No (2)

Skip To: Q60 If Do you have an assistantship? = No

Q56 Does your assistantship come with healthcare?

- Yes (1)
- No (2)

Q57 Does your assistantship come with tuition remission?

- Yes (1)
- No (2)

Q58 Do you have a 9 month or 12 month assistantship?

- 9 month (1)
- 12 month (2)

Q59 How much are you paid for your assistantship?

Q60 Do you have hourly work?

- Yes (1)
- No (2)

Skip To: Q63 If Do you have hourly work? = No

Q61 What is your hourly rate?

Q62 How many hours do you work per week?

Q63 Are you an international student?

- Yes (fully enrolled student) (1)
- Yes (study abroad student) (2)
- No (3)

Skip To: Q65 If Are you an international student? = No

Q64 What is your country of origin?

Q65 Are you a first-generation student?

*Note: A first-generation college student is defined as a student whose parent(s)/legal guardian(s) have not completed a bachelor's degree. This means that you are the first person in your family to attend a four-year college/university to attain a bachelor's degree.

- Yes (1)
- No (2)
- Don't know or prefer not to answer (3)

Q66 Do you live on campus?

- Yes (1)
- No (2)

Q67 Are you involved in any of the following Greek organizations?

- IFC (Phi Delt, Sigma Nu, etc.) (1)
- CPH (Tri Delt, KKG, etc) (2)
- NPHC (AKA, Delta Sigma Theta, etc.) (3)
- None of the above (4)

Q68 Are you a parent?

- Yes (1)
- No (2)

Skip To: End of Block If Are you a parent? = No

Q69 Does your child live in your household?

- Yes (1)
- No (2)

Appendix C: Grove Grocery Mission Statement

Mission

Grove Grocery aims to make significant, long-term improvements in peoples' lives by (1) providing *all* students, faculty, and staff in need with nutritious food and other essential items, and (2) addressing the underlying causes of hunger on campus.

Goals

Immediate relief: addressing acute hunger and need

- **Increase our presence** on campus/in the community so that we can get more patrons, volunteers, and donors. In order to meet this goal, we have:
 - Created a marketing committee, campus outreach committee, and community outreach committee. Each of these committees has its own goals, which will be detailed in a separate document
- Help **reduce the stigma of hunger/poverty** on campus so that we can encourage more people to seek the help they deserve, and to reduce the negative emotional impact that shame and stigmas can have on individuals. In order to meet this goal, we plan to:
 - Develop and execute a professional marketing campaign, which will include redesigning our logo and renaming ourselves from “Ole Miss Food Bank” to “Grove Garden: The UM Food Pantry”
- Improve **accessibility** to food and other essential items. In order to meet this goal,
 - We are expanding our hours
 - We created a [grocery order form](#)
 - We are leaving grab and go bags outside the Food Pantry for 24/7 and emergency food access
 - We are planning to distribute more meal swipes. These are convenient, popular, and give people the freedom to pick their food at campus dining locations, just like everyone else
 - To ensure that a lack of transportation isn't a barrier, we are exploring delivery, improving parking spots/bus routes
 - Ultimately, we would like to move the Food Pantry to a more central/accessible location. In the meantime, we are improving signage at Kinard Hall.
- Take a **client-centered approach** to addressing basic needs insecurity. In order to meet this goal, we will...
 - Work with patrons to improve our quality of service and understand what their wants and needs are
 - Actively promote [diversity, equity, and inclusion](#) within the Food Bank and on campus
 - Create a warm and welcoming environment within the Food Bank (for example, by decorating for holidays)
 - Make our patrons comfortable by clearly communicating that we prioritize confidentiality and privacy
- **Improve the quality of the food and essential items** we provide. In order to do this, we will...
 - Ask patrons what food they want through surveys
 - Stock foods to accommodate all cultures, religious needs, and dietary needs

Long-term change: addressing the underlying causes of hunger and need

- Work with administration to implement better policies (financial aid, etc.)

- **Connect students with the [tools and resources](#)** they need and deserve in order to make significant, long term changes in their lives
- Establish **working relationships with other organizations** and ASB on campus to ensure policies and changes can include and reach all students, faculty, and staff across campus.

Appendix D: Copy of original USDA six-item module

U.S. Household Food Security Survey Module: Six-Item Short Form Economic Research Service, USDA September 2012

Revision Notes: The food security questions in the 6-item module are essentially unchanged from those in the original module first implemented in 1995 and described previously in this document.

September 2012:

- Added coding specification for “How many days” for 30-day version of AD1a.

July 2008:

- Wording of resource constraint in AD2 was corrected to, “...because there wasn’t enough money for food” to be consistent with the intention of the September 2006 revision.

January 2008:

- Corrected user notes for coding AD1a.

September 2006:

- Minor changes were introduced to standardize wording of the resource constraint in most questions to read, “...because there wasn't enough money for food.”
- Question numbers were changed to be consistent with those in the revised Household Food Security Survey Module.
- User notes following the questionnaire were revised to be consistent with current practice and with new labels for ranges of food security and food insecurity introduced by USDA in 2006.

Overview: The six-item short form of the survey module and the associated Six-Item Food Security Scale were developed by researchers at the National Center for Health Statistics.

Background: The six-item short form of the survey module and the associated Six-Item Food Security Scale were developed by researchers at the National Center for Health Statistics in collaboration with Abt Associates Inc. and documented in “The effectiveness of a short form of the household food security scale,” by S.J. Blumberg, K. Bialostosky, W.L. Hamilton, and R.R. Briefel (published by the *American Journal of Public Health*, vol. 89, pp. 1231-34, 1999). ERS conducted additional assessment of classification sensitivity, specificity, and bias relative to the 18-item scale.

If respondent burden permits, use of the 18-item U.S. Household Food Security Survey Module or the 10-item U.S. Adult Food Security Survey Module is recommended. However, in surveys that cannot implement one of those measures, the six-item module may provide an acceptable substitute. It has been shown to identify food-insecure households and households with very low food security with reasonably high specificity and sensitivity and minimal bias compared with the 18-item measure. It does not, however, directly ask about children’s food security, and does not measure the most severe range of adult food insecurity, in which children’s food intake is likely to be reduced.

[Begin Six-Item Food Security Module]

Transition into Module :

These next questions are about the food eaten in your household in the last 12 months, since (current month) of last year and whether you were able to afford the food you need.

NOTE: If the placement of these items in the survey makes the transition/introductory sentence unnecessary, add the word “Now” to the beginning of question HH3: “Now I’m going to read you....”

FILL INSTRUCTIONS: Select the appropriate fill from parenthetical choices depending on the number of persons and number of adults in the household.

HH3. I’m going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true, sometimes true, or never true for (you/your household) in the last 12 months—that is, since last (name of current month).

The first statement is, “The food that (I/we) bought just didn’t last, and (I/we) didn’t have money to get more.” Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or Refused

HH4. “(I/we) couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or Refused

AD1. In the last 12 months, since last (name of current month), did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?

- Yes
- No (Skip AD1a)
- DK (Skip AD1a)

AD1a. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- DK

AD2. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?

- Yes
- No
- DK

AD3. In the last 12 months, were you every hungry but didn't eat because there wasn't enough money for food?

- Yes
- No
- DK

[End of Six-Item Food Security Module]

User Notes

(1) Coding Responses and Assessing Households' Food Security Status:

Responses of “often” or “sometimes” on questions HH3 and HH4, and “yes” on AD1, AD2, and AD3 are coded as affirmative (yes). Responses of “almost every month” and “some months but not every month” on AD1a are coded as affirmative (yes). The sum of affirmative responses to the six questions in the module is the household’s raw score on the scale.

Food security status is assigned as follows:

- Raw score 0-1—High or marginal food security (raw score 1 may be considered marginal food security, but a large proportion of households that would be measured as having marginal food security using the household or adult scale will have raw score zero on the six-item scale)
- Raw score 2-4—Low food security
- Raw score 5-6—Very low food security

For some reporting purposes, the food security status of households with raw score 0-1 is described as food secure and the two categories “low food security” and “very low food security” in combination are referred to as food insecure.

For statistical procedures that require an interval-level measure, the following scale scores, based on the Rasch measurement model may be used:

Number of affirmatives	Scale score
0	NA
1	2.86
2	4.19
3	5.27
4	6.30
5	7.54
6 (evaluated at 5.5)	8.48

However, no interval-level score is defined for households that affirm no items. (They are food secure, but the extent to which their food security differs from households that affirm one item is not known.)

(2) Response Options: For interviewer-administered surveys, DK (“don’t know”) and “Refused” are blind responses—that is, they are not presented as response options but marked if volunteered. For self-administered surveys, “don’t know” is presented as a response option.

(3) Screening: If it is important to minimize respondent burden, respondents may be screened after question AD1. Households that have responded “never” to HH3 and HH4 and “no” to AD1 may skip over the remaining questions and be assigned raw score zero. In pilot surveys intended to validate the module in a new cultural, linguistic, or survey context, however, screening should be avoided if possible and all questions should be administered to all respondents.

(4) 30-Day Reference Period: The questionnaire items may be modified to a 30-day reference period by changing the “last 12-month” references to “last 30 days.” In this case, item AD1a must be changed to read as follows:

AD1a. [IF YES ABOVE, ASK] In the last 30 days, how many days did this happen?

_____ days

[] DK

Responses of 3 days or more are coded as “affirmative” responses.

(5) Self Administration: The six-item module has been used successfully in mail-out, take-home, and on-site self-administered surveys. For self-administration, question AD1a may be presented in one of two ways:

- Indent AD1a below AD1 and direct the respondent to AD1a with an arrow from the “Yes” response box of AD1. In a parenthetical following the “No” response box of AD1, instruct the respondent to skip question AD1 and go to question AD2.
- Present the following response options to question AD1 and omit question AD1a:
 - Yes, almost every month
 - Yes, some months but not every month
 - Yes, only 1 or 2 months
 - No

In this case, either of the first two responses is scored as two affirmative responses, while “Yes, only 1 or 2 months” is scored as a single affirmative response.

The two approaches have been found to yield nearly equal results. The latter may be preferred because it usually reduces the proportion of respondents with missing information on how often this behavior occurred.