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THE LATE NIGHT SNACKING SCENE
AT THE UNIVERSITY OF NEW HAMPSHIRE

PROMOTING HEALTHIER OPTIONS
AND WINNING BACK MARKET SHARE

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SPRING 2012

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EXECUTIVE SUMMARY

The University of New Hampshire in Durham has a goal of becoming the healthiest campus community in the country by 2020. In order to achieve this goal, I investigated multiple ideas to improve late night snacking on the UNH campus. My hope is that students will engage in healthier late night eating habits. Not only would this benefit the lives of the UNH population as a whole, but it will assist UNH-operated food stores in gaining more of the market share.

The research process began with a preliminary analysis. This analysis included individual interviews and a focus group with students, as well as an interview with a UNH dining manager. Based on the results from this preliminary analysis, I was able to create a survey for UNH students to complete.

The survey data served two purposes in regards to the analyses. First, the data was used to identify the different segments of the UNH student population through segmentation analysis according to their perceptions and preferences. Secondly, I used the survey results to understand the competition among the various late night snacking locations (UNH vs. non-UNH facilities) through positioning analysis. The total number of observations was eighty-five, and the segmentation and positioning analyses were performed using Marketing Engineering for Excel software.

The study found that the problem was not related to a lack of options available in the UNH-operated food establishments. Instead, the data suggests that unhealthy student snacking habits are more closely related to the lack of social atmosphere and convenience. These were identified as important attributes to UNH students. This indicates that in order to draw more students to the healthy options available on campus, UNH food stores should consider additional seating, promotional deals, social events, and offering delivery services to on-campus residences.

I. INTRODUCTION

At the University of New Hampshire (UNH) located in Durham, late night snacking is a relevant topic for the campus community. Between the hours of 10 p.m. and 2 a.m., the streets are lined with hungry students on the prowl. Students walk out of stores with bags filled with foods such as subs, quesadillas, pizza, fries, chips, and candy. Instead of making healthier choices, they gravitate towards options that do not benefit their overall health. Why are students choosing unhealthy snacks? Are the UNH dining facilities missing something from their late night snacking options? More specifically, could they effectively introduce healthier food choices? The purpose of this research is to answer these questions and possibly help the UNH dining facilities win back some of the market share from competing food establishments on Main Street.

As part of my research about healthy eating habits, I completed a literature review. Not only did I learn more about healthy eating habits, but I expanded my knowledge about segmentation and positioning analyses. In one case, the healthy lifestyle consumer is analyzed by breaking a surveyed population into two segments using cluster analysis (Divine & Lepisto, 2005). The healthy lifestyle consumers are a very relevant segment of the population these days, and companies are taking notice. For example, PepsiCo has mandated that at least 50 percent of their new food products be in the 'healthier for you' category. In another article, the positioning of the organic food category is analyzed as a niche market that is enlarging. The information found from the literature review makes me believe that it would be in the best interest of the UNH food stores to follow suit of other healthy food establishments, and adjust their food menus toward a healthier way. Interestingly enough, I found from my positioning analysis, which will

be described later, that UNH-operated stores are viewed as having a wider variety of healthy food options than stores on Main Street. Perhaps UNH needs to rethink its marketing techniques in addition to its menus. In this way, UNH could win over students in the late night snacking scene while creating a healthier campus.

In my own research study about late night snacking, there will be different stages in order to gather all of the appropriate information necessary to draw conclusions. First of all, the objective of stage 1 is to understand the preferences and habits of UNH students for late night snacking based on the personal interviews, focus group, and the survey. In stage 2, I will identify the different segments of the UNH student population through segmentation analysis according to their perceptions and preferences. These perceptions and preferences will be based on the rating of attributes determined via focus groups and interviews in the previous stage. In stage 3, I will come to understand the competition among the various late night snacking locations (UNH vs. non-UNH facilities) through positioning analysis, which will be based on the perceptual and preference ratings of various stores using the same pre-determined attributes. Lastly, in stage 4, I will figure out where there are potential opportunities or improvements that could be made at the on-campus UNH facilities stores toward a healthier way, while at the same time thinking of ways to make the UNH-operated stores more appealing to students in the first place.

The methodologies of this study are also important to note. The research was composed of two steps. The first step, which is the preliminary research, has been conducted through focus groups and interviews on the UNH campus. For the focus group and personal interviews, I have recruited study participants in person around campus. I have conducted multiple personal interviews with students, a focus group with ten freshmen, and an interview with an area manager of UNH dining facilities. Qualitative methodologies have been used for the personal

interviews and focus group in order to determine which attributes are the most important to UNH students in late night snacking. The second step was to conduct a survey online using the Qualtrics tool. The link to the survey has been posted on Facebook to obtain participants. In addition, paper versions of the survey have been distributed and collected in classrooms for the purpose of data collection. Quantitative analysis will be used for the surveys, including statistical analysis as well as segmentation and positioning analysis using Marketing Engineering for Excel software (Lilien, Rangaswamy, & De Bruyn, 2007).

Based on the interpretation of the data, I will be able to figure out where there is room for improvement or where there is an opportunity for UNH dining facilities to gain more of the late night snacking market share, while enhancing their food options to be healthier overall.

In the next section, I will provide a literature review which focuses on past articles written about health and eating habits. Then, I will explain the research context, which includes the reasoning behind this study. To follow, there will be a breakdown of the methodology, including the preliminary, segmentation, and positioning analyses. The data, analysis method, and results will be described for each of these analysis types. Finally, managerial implications of the study findings conclude the thesis.

II. LITERATURE REVIEW

In the creation of my honors thesis, it is important to look at previous studies in order to get different perspectives about the habits and preferences of consumers in regards to food consumption. Perhaps different types of consumers care more about leading a healthy lifestyle. It is possible that others place more importance on the social atmosphere, so they will eat wherever their peers are eating. This literature review will help me to more fully understand the market as I carry out my research.

In my literature search, I have found a very interesting article which analyzes the healthy lifestyle consumer. These consumers look to purchase products that coincide with their desire to prevent future health problems and maximize their personal well-being. The demand for healthy products is being driven by a large customer need segment that wants the benefits these products can provide (Divine & Lepisto, 2005). There are hard numbers to back-up this claim as well. Research used by this study indicates that 71.8 percent of the population is eating fewer calories and/or less fat with the purpose of trying to lose or maintain their weight, and along with this, 61 percent have indicated they have a goal of losing 20 pounds or more. Perhaps even more importantly, 90 percent indicate they select food products based on health considerations at least some of the time. The demand for healthy food products is evident, and companies are taking note. PepsiCo has mandated that at least 50 percent of their new food products be in the 'healthier for you' category as a result of strong demand for healthier snack products. The fact that an already successful company such as PepsiCo is making such big changes means that the collective voice of the healthy lifestyle consumers is being heard.

In the study conducted by Richard L. Divine and Lawrence Lepisto (2005), several conclusions were drawn about healthy lifestyles. The sample that Divine and Lepisto used for their study consisted of licensed drivers from the early 20s to over 80. They used a nationwide mail survey to collect responses. The final sample contained 582 usable responses. The determination of a respondent's lifestyle as healthy was based on their responses to a series of questions regarding their diet and exercise behavior. For the purpose of my honors thesis, I will only focus on the findings that are relevant to the food consumption part of the study.

Divine and Lepisto (2005) used a cluster analysis in order to find the differences between healthy and unhealthy consumers in terms of habits. Please see section A of the Appendix for the results of the cluster analysis of healthy lifestyle behaviors. According to the results, there are significant differences between the two clusters on six of the seven attributes, with the exception being alcohol. The most significant differences between clusters were observed with regard to fruit and vegetable consumption. The healthy cluster consumed an average of 44.73 servings per month, while the unhealthy cluster only consumed 8.97. Perhaps I could consider this information as I explore healthier food choices for the UNH campus—it might be possible that UNH food stores are lacking in offering fruits and vegetables late at night.

Once Divine and Lepisto (2005) examined all of the data, they drew several conclusions that might be significant to my own research about healthier late night snacking options. First of all, it was found that people who maintain healthy lifestyles tend to be female, older in age, and more educated. Even though full-time college students tend to not be older in age, it is important to recognize the other two factors connected to healthier lifestyles—being female and more educated. Since college students are getting a higher degree of education, they might tend to care more about maintaining their physical health. Another important factor is that more females are

looking for healthier products. This is important because perhaps it would be worthwhile for UNH to offer healthier products in their food stores if they had high demand from females for this change. Another valuable finding was that excitement was significantly linked to maintaining a healthy lifestyle. In the chart located in section B of the Appendix, it can be seen that there is a negative coefficient for “excitement.” This indicates that the more one valued excitement, the less likely one was to maintain a healthy lifestyle (Divine & Lepisto, 2005). In the article, it is recommended for companies to add more unique characteristics to their products in order to induce a sense of excitement from the consumers. I could use this advice as I think of a way to make healthier options more desirable to students. The final important conclusion that was drawn in Divine and Lepisto’s study was that maintaining a healthy lifestyle is affected by two time-related variables—temporal orientation and role overload. According to the results from this study, people who tend to plan ahead and people who experience less role overload/time pressure are more likely to maintain a healthy lifestyle. Many college students feel as though they have a short amount of time to complete the large number of tasks that are assigned to them. Therefore, they might have a more difficult time trying to maintain a healthy lifestyle, whether that means low-calorie food choices or exercising consistently. This could be a strong point to share with UNH when I present my findings through the creation of a written thesis.

Earlier in this literature review, it was mentioned that PepsiCo has mandated that at least 50 percent of their new food products be in the ‘healthier for you’ category. Taking a closer look at why they are doing this and how it will be accomplished helped me to better understand the market for healthy food. In 2008, Frito-Lay, the foods division of PepsiCo, shifted to healthier products in their Indian market. Frito-Lay did this in hopes that they could reposition the brand

and increase market share in India. Gautham Mukkavilli, managing director of Frito-Lay in India, has indicated that in order to increase market share, the company is focusing and investing strongly in product innovation, and aggressive marketing initiatives. With this powerful combination, Frito-Lay will be able to differentiate itself from its competition (Mehra, 2008). This state of mind goes along with what the article by Divine and Lepisto (2005) was saying. In order for UNH to be successful with introducing healthier food options in its stores, there must be something unique and exciting about the offerings. There needs to be a way that the food options can be healthier while the students still maintain their level of enjoyment in late night snacking. Positioning the store is a vital step of the analysis process that I will undertake after collecting survey data. First, it will be my job to figure out in which attributes UNH food stores are lacking. Then, I will have to find a way to improve the overall quality of the services at the same time as introducing healthier products. In the article about Frito-Lay, Mukkavilli stated that although Frito-Lay will never really be categorized as a health food brand, its initiatives are trying to prove that its quality is higher than its competitors (Mehra, 2008). The UNH food establishments need to have a competitive advantage over the outside competition so that students are motivated to try the healthier options, which might be more expensive. Even Frito-Lay had to raise their prices as a result of the new healthy initiative—10% increase across all brands. If UNH can find a way to not raise prices significantly with the introduction of healthier products, then that would be the best case scenario, since food might be an item in which students are more price sensitive.

In yet another article, Raffaele Zanolli and Simona Naspetti (2006) explore the positioning of organic products. According to this study, the current positioning of organic products is based on a segmentation approach, which recognizes the organic market as one that is

niche yet enlarging. Organic products are unique because the products themselves define the target market. The positioning is mainly based on some attributes of the organic products. The attributes might be positive (healthy, better tasting) or negative (produced without chemicals, GMO free, with no added artificial flavoring, preservatives, etc.), depending on how the company wants the consumer to view the product. Consumers only have a limited number of reasons for why they purchase healthier food products, which may include having poor physical health, wanting to maintain their health, or wishing to be physically attractive in terms of body weight. This means that it might be a challenge to convince a large portion of the UNH student population that it is important to purchase a niche product like organic food. Nonetheless, it might turn out that the majority of the students care about leading a healthy lifestyle. In that case, it will not be as much of a challenge because their habits and preferences will match the product offerings.

It is to the benefit of the students for them to adopt healthier lifestyles. Studies have shown that students tend to gain weight during their years in college. One study found that 71 percent of freshmen and seniors did not meet federal dietary recommendations for the consumption of fruits and vegetables (Miller, 2009). It is easy for college students to forget that their physical health is important when they have such busy schedules and the social scene revolves around drinking and eating. Nonetheless, perhaps college students need to consider how their short-term habits can affect their long-term health. Sherrie Delinsky, Ph.D., a psychologist and eating disorders expert, has indicated that the eating habits young adults create in college might determine their eating habits for life. Therefore, it is important for college students to learn healthy eating habits early.

III. RESEARCH CONTEXT

At the University of New Hampshire and colleges in general, life for students is anything but the norm. Many of the students have very busy schedules, whether they are attending group meetings for a class project, studying for exams, participating in sports, working at a part-time job, or maintaining a social life. As a result of having a plethora of commitments, students tend to have long days. Staying up late is one way in which students can try to fit everything into their days. As students stay up later and the hours pass since they had last eaten dinner, they start to think about their snacking options. What is available for them to eat late at night?

There are places on-campus (UNH dining facilities) and off-campus (food establishments on Main Street in Durham) where students can purchase a late night snack. There are few locations on-campus that stay open late, but I will be analyzing the two most popular ones—Pita Pit and Wildcatessen. These locations also stay open the latest. Pita Pit is a part of Philbrook Café, which is a food store where students can purchase small snacks or more filling food items. For small snacks, Philbrook Café offers items such as chips, cookies, and candy. If a student would like a made-to-order meal then they could go to Pita Pit where a variety of pita pocket sandwiches are offered. Students can pick whichever meats and vegetables they desire in their pita pocket. This is the healthiest type of food that is offered late at night, but still there is not much variety since a student can only choose from which type of pita pocket they would like. Pita Pit does not have a social atmosphere, as there is not much of an area for students to gather as they enjoy their food. Pita Pit is open until 1 a.m. on weekdays and weeknights. Wildcatessen is the other place on campus where students can go for both small snacks and made-to-order meals. Wildcatessen has a very social atmosphere, and is always very busy. If a student wishes to

only purchase a small snack, they can find items such as chips, candy, and pre-packaged ice cream. As for made-to-order meals, they offer subs, wraps, quesadillas, fries, and more. There are a few tables for students to sit and eat, and thus the social atmosphere is better than the Pita Pit. Wildcatessen is open until 1 a.m. Monday through Wednesday and on Sunday. They are open until 3 a.m. Thursday through Saturday in order to accommodate students who stay out later on the weekend nights. There are also two popular food establishments on Main Street that are not affiliated with UNH. These food places are Durham House of Pizza (DHOP) and Domino's. There are others, but for the purposes of this study, I chose only two to analyze as a point of comparison with UNH facilities. DHOP is a place that is famous for its special late night deals on pizza by the slice—\$1.50 per slice after 11 p.m. There are large tables, small tables, and a nook where people can enjoy their pizza. As a result of the larger area for seating and convenient location on Main Street, DHOP is an optimal place for students to socialize. DHOP is open until 10 p.m. on Monday through Wednesday, 9 p.m. on Sunday, and 2 a.m. on Thursday through Saturday. The final place I will analyze is Domino's, which is located in a shopping plaza off of Main Street. This well-known, nationally recognized pizza place is different because they offer delivery services. If a student does not wish to brave the cold weather or walk a far distance late at night, then they may opt to have a Domino's pizza delivered. Domino's is open until 2 a.m. on Sunday through Wednesday, and until 3 a.m. on Thursday through Saturday. As one can see, there are limited choices in the type of food that students can purchase in the later hours of the night. This brings me to the purpose of this research study.

The overall purpose of this study is to understand and analyze the late night snacking preferences of UNH students, and determine how to enhance late night snacking options in the UNH Durham campus toward a healthier way. My motivation for this initiative is simple—it is

no secret that college students tend to gain weight and become less healthy overall during their pursuit of a university degree. In the literature review, I had mentioned an article about college students' unhealthy eating habits. According to this article, 71 percent of freshmen and seniors did not meet federal dietary recommendations for the consumption of fruits and vegetables (Miller, 2009). Probably as a result of finding studies similar to this one, UNH has begun to recognize the need to undertake healthier food practices. Currently, their mission is to be the healthiest campus community in the country by 2020. Taking one step forward in this effort, the University of New Hampshire will no longer sell energy drinks in its retail and vending locations beginning in January 2012.¹ Besides taking energy drinks off the shelves, UNH dining has also eliminated trans fats from its offerings. It is a step in progress; nonetheless, the variety of healthy food items is somewhat lacking for the students who are looking for something to satisfy their taste buds late at night. If the University of New Hampshire offered a wider variety of food choices, then the physical health of UNH students would be enhanced and the university could win back some of the market share from off-campus food places.

As a result of my own personal knowledge and preliminary analysis, I have certain expectations about the late night snacking habits and preferences of UNH students that will be found through the analysis of the survey data. I believe that there will be a significant number of students who desire healthier food choices, especially females. Also, students who are more social will care more about the overall attributes of late night snacking, while at the same time, students who are less social will find the healthiness of the products more important. The basis of

¹ "UNH Will Take All Energy Drinks Off The Shelves Beginning In January 2012." University of New Hampshire Media Relations. 26 Sept. 2011
<http://www.unh.edu/news/cj_nr/2011/sep/em26energy.cfm>.

this hypothesis stems from the article *Analysis of the Healthy Lifestyle Consumer* written by Richard L. Divine and Lawrence Lepisto (2005). Once the survey data has been properly analyzed, I will be able to draw a conclusion as to whether or not my general hypothesis is correct. On December 1, 2011, I received written approval from the Institutional Review Board (IRB) to pursue my research about late night snacking at UNH. Please see the last page of this paper to view the official letter of approval.

IV. METHODOLOGY

i. PRELIMINARY ANALYSIS & RESULTS

The purpose of the preliminary analysis was two-fold. First, I wanted to find out the habits and preferences of UNH students in regards to late night snacking. Second, I wanted to identify the important attributes for the survey, which would be the next step in the research process. In order to conduct a proper preliminary analysis, I conducted several personal interviews with students, one personal interview with a UNH dining manager, and a focus group consisting of freshmen. Please see the Appendix for the focus group and student interview questions (section C), as well as the interview with a UNH dining manager (section D).

From the focus group and interviews conducted, I came to several conclusions:

- Wildcatessen seems to be the top place to eat late at night on-campus, according to UNH Dining Management and freshmen
- I should try to survey underclassmen who live on-campus, because they seem to do more of the on-campus late night snacking.
- Dining dollars are essential to people who snack late at night on-campus, because the prices on-campus are higher than they are off-campus
- Late night snacking occurs later on weekends than weekdays
- UNH seems to be missing some areas of late night snacking: smaller prepared food items, healthy food options for weekdays, etc.
- Students want food that is very tasty and comforts them late at night – many of my interviewees used the words “sweet” and “salty”

- 10 a.m. – 1 a.m. are the peak hours for late night snacking, and the UNH students I interviewed mostly agree with that
- UNH students desire convenience when they are snacking late at night – they want something quick and easy
- Students who are more social probably snack later at night and more often

While these conclusions are useful, it is also important to break down the various parts of the preliminary analysis and describe them individually. Next, I will analyze each interview, both with a UNH dining manager and UNH students, as well as the focus group consisting of freshmen.

The first interview conducted was with a Retail Area Manager for UNH Dining Services. He provided a great deal of valuable information about the late night snacking habits of UNH students. According to him, the most popular place for late night snacking on campus is The Wildcatessen, which is located in Stillings Dining Hall just outside Stoke residence hall. He believes that the three factors for students preferring the Wildcatessen are the following: extended hours (open until 3 a.m. Thurs-Sat), selection of both convenience and grocery items and a full food service line with subs, tenders, quesadillas, etc., and socially it is a big space where students can collect after events. The most popular items at Wildcatessen are steak and cheese subs and quesadillas. It is also important to note that the foot traffic for UNH dining locations during the late night hours is much busier than the daytime dining hours because there is no competition with the three dining halls on campus. This indicates that late night snacking is a relevant concern for UNH dining and the UNH community as a whole, because many students partake in it. The UNH dining manager has recognized that the UNH food establishments have both strengths and weaknesses in terms of late night snacking. He specifically stated, “Strengths

are we have well-staffed and clean facilities built to handle a large amount of customers. The weaknesses are finding healthy options with a wide enough appeal to keep room on the menus and coordinating student staff to complement our full-time staff.” He also said that more diversification is missing from UNH dining’s late night offerings. “We’ve historically had a great deal of success with steak and cheese, chicken tenders, fries, etc. and I think we’ve been a little nervous to move away from that product line. The Pita Pit – now in its second year - has given us an option to make sandwiches (always popular) in a more unique (and healthier) form.”

In the next interview, I spoke with a senior undergraduate student who lives on-campus. He said that he snacks more on the weekends because he likes to eat when he is socializing. His usual places for late night snacking are Durham House of Pizza (DHOP) and Store-24. He said that he does not like to purchase items from the UNH food establishments because he feels the items are over-priced at those places. One quote that stood out to me is when he said “you typically can’t find an apple late at night.” This indicates that he does not feel there are many healthy options available to students in the late hours.

In an interview with another senior undergraduate student who lives off-campus, she indicated that she snacks often on the weekends as well as 3-4 nights per week. She partakes in late night snacking when she is socializing and when she needs a break from her homework. She usually purchases food items from Panache (when it was open), Wildcatessen, DHOP, Kurt’s Lunchbox, and Domino’s. The type of food items she purchases most frequently are pizza and fries. The overall characteristics of the food she craves late at night are salty, crunchy, and sweet foods. Lastly, the top three deciding factors for where she eats late at night are the following: proximity, payment options (she liked using her Dining Dollars when she had them), and quality of the food. I used some of these factors as attributes to be analyzed in the survey, which will be

described later in this paper. When asked if there were any options missing from the late night snacking scene, she said that she wishes the UNH food places offered pizza late at night, so that students could use their Dining Dollars.

A sophomore girl in my residence hall has a fairly different perspective on late night snacking. She does not partake in late night snacking because she is socializing—she only eats late at night when she is studying or watching television in her dorm room. She only has small snacks in the later hours, and mostly eats pre-packaged foods that she keeps in her room. The interview with her made me think that, perhaps, if a student is more social then he or she will purchase food items more often in the later hours in on-campus and off-campus stores.

Also, in trying to get different perspectives, I interviewed another two undergraduate students who both live far off-campus. They indicated that they do not ever partake in late night snacking on the UNH campus or on Main Street in Durham. This leads me to hypothesize that only students who live on or near the UNH campus would care much about the food items offered in the UNH dining establishments.

The last part of the preliminary analysis was the focus group with 10 freshmen students. This group indicated that Wildcatessen is the top place to eat late at night, which is consistent with what the UNH dining manager said. Also, they said that UNH food places are over-priced, but they still like purchasing items at on-campus locations because they are able to use their Dining Dollars. They indicated that delivery is a good option when they do not feel like walking for food or when the weather conditions are poor. This is especially relevant to freshmen, because most of them are not allowed to keep their cars on campus. When asked which types of food are desirable to them late at night, they responded with cookies, sandwiches, subs, and other small snack foods. Some of the top deciding factors for this group in choosing what to eat in the

later hours are convenient location, how quickly the food can be obtained, and the taste. All of these factors were used as attributes in the creation of the survey. The most interesting finding from the focus group was when some of the students said that on weekdays they desire healthy food over unhealthy food, because it helps them focus on studying and gives them more energy.

After conducting a preliminary analysis, a survey was created to find out more specific information. With all of the data collected from the surveys, a thorough analysis will be conducted using segmentation and positioning analysis software through Marketing Engineering for Excel. Once the analysis is completed, I will be able to determine how to enhance late night snacking options on the UNH Durham campus toward a healthier way. Enhancing the late night food options to be healthier would benefit UNH students and their overall quality of life, as well as help in UNH's mission to be the healthiest campus community in the country by 2020.

ii. SEGMENTATION ANALYSIS

A. DATA

After analyzing the preliminary findings from the interviews and focus group, I was able to first figure out the habits and preferences of UNH students, and then identify the important attributes for the survey. In the survey, there are three different types of questions: segmentation, positioning, and additional information regarding students' habits and demographics.

In order to understand the results from the survey, it is essential to breakdown the survey and explain the individual parts (see section E of the Appendix for the survey questions). To

start, I will describe the attributes that I chose for the matrices in the survey questions. The attribute *wide variety* was chosen based on the interviews with the students who felt they were not being offered enough variety. *Wide variety* means that there are many types of food options that a consumer can choose from in the store. *Good value* means that the consumer feels as though they are getting a lot of food and good quality food for the amount of money they are paying. *Convenient location* was mentioned often in the student interviews as an important factor, so that is why I included it. *Convenient location* means that the food store is located in a place that is easy to access—whether it is close to the student’s place of residence or it is in a central location in relation to the UNH campus. *Freshness* means that the food seems as though it is freshly made, not with old ingredients. *Speed of service* means that there are not long waits in line and the food is prepared quickly once the order is placed. *Availability of seating* means there are tables and chairs available inside and/or outside the store where customers can sit and eat their food. The attribute *potential to socialize* seemed important in the preliminary analysis, so it was essential to include it in the survey. *Potential to socialize* means there is enough space and a good atmosphere in the store so that students are able to interact with one another. *Availability of delivery* means that customers are able to get the food delivered to their place of residence if they so desire. *Low calorie intake* means that there are food options with low calories available in the store. *Variety of healthy options* means that there are many different types of healthy foods available in the store. Now that the attributes are clear, the survey can be explained from beginning to end.

The survey begins with two screening questions. If the person taking the survey is neither a UNH student nor partakes in late night snacking in Durham, then s/he is asked to not continue on with the rest of the survey. The screening part of the survey serves to prevent people who do

not have much experience with late night snacking in Durham from taking the survey, since we wish to gain as much valuable knowledge as possible.

The next part of the survey is the segmentation question, which asks “When considering store options for late night snacking, how important are the following attributes?” Then, there is a series of scaled measures where respondents are asked to circle how important the various attributes (described previously) are to them on a scale from 1 to 7, where 1 is “not at all important” and 7 is “extremely important.” There is a neutral point on the scale at 4. These consumer preferences for the various attributes are general ones, not pertaining to any store in particular—the next part of the survey serves this purpose instead. This part of the survey, called the positioning data section, will be described later in section iii.

Skipping to the last part of the survey, used as an input to the segmentation analysis, is the additional information. There are two reasons for this section—to find out descriptive (also known as discrimination) data about respondents’ habits as well as their demographic information. In order to find out about the respondents’ habits, I used a series of scaled measures with various statements about their habits (see Appendix, section E). A scale labeled from 1 to 5, where 1 is “strongly disagree” and 5 is “strongly agree,” was used. The neutral point of this scale was at 3. Also, as a part of their preferences, I wanted to know if students would like the option of having food delivered to their places of residence from UNH-operated stores. This could be a potential opportunity for UNH to add to their services. In the second part of the additional information section, respondents are asked about their demographics. The demographic information that I wished to know about respondents includes gender, where the students reside during the school year, and which class they are (e.g. freshman, sophomore, etc.).

B. ANALYSIS METHOD

Segmentation analysis is conducted in order to understand the consumer market that will be purchasing and using the goods and services provided. There are two phases to the segmentation process. The first step is to segment the market using basis variables, such as customer needs, wants, preferences, and values. The second step is to describe the market segments identified using variables that help the firm understand how to serve those customers, how to talk to these customers, and buyer switching costs (Lilien et al., 2007). It is not always clear cut finding how to segment the market, because sometimes consumer habits and preferences overlap a great deal. With some close inspection of the data and analysis results, there are ways to find differences in consumer groups, even if they seem slight. In the late night snacking segmentation analysis for UNH, these differences were difficult to find, but that is to be expected when most of the consumers are part of a similar demographic group.

There are many ways to segment a market, and there are various items to consider when doing so. First of all, one must take into account the demographics (Lilien et al., 2007). Demographic information includes age, income, marital status, family type and size, gender, social class, etc. Next, psychographics should be taken into account. These include lifestyle, values, and personality characteristics. Consumer behavior, including usage occasions, usage level, complementary and substitute products, brand loyalty, etc., is very important to understand as well. Sometimes the consumer completing the purchase is not actually the one making the decision about the purchase, and it can be useful to know who the decision makers are. Lastly, media patterns of the consumers might be observed, in terms of level of use, types of media used, and times of use. Not all of this information needs to be collected for every segmentation

analysis—it is dependent on the type of study conducted and which information is necessary to know.

Getting into the more technical aspects of the segmentation analysis using Marketing Engineering for Excel software, statistics are used in order to determine the actual clusters into which the surveyed consumers are broken up. In the “Results” section, each part of the analysis process will be explained in full, from how to read a dendrogram to determining which clusters to target. It is not wise to choose a marketing plan that covers all market segments. Only the most relevant and profitable clusters should be targeted. The statistical analysis results, along with the extra demographic and psychographic information collected, allow marketing professionals to determine which market segments are optimal to target.

C. RESULTS

To interpret the results of the segmentation analysis, first, it is important to understand the meaning of attributes used in the segmentation. Please see section ii of this paper under the sub-heading “Data” for details about the variables used in this analysis. It is important to note that the attribute "Low Calorie Intake" was eliminated during analysis due to high correlation with the attribute "Variety of Healthy Options." "Variety of Healthy Options" already encompasses "Low Calorie Intake."

I first ran the segmentation analysis using nine clusters to see what would be the optimal number of segments based on the consumer habits and preferences. Based on the dendrogram created from the nine cluster analysis (see Appendix, section F), I determined that three clusters would be optimal because the first largest jump in distance (which indicates the differences between the segments), starting from the bottom of the graph, occurs between .63 and 1.11.

Looking at the analysis using three clusters, there are groups of respondents with different habits and preferences. Nonetheless, one must remember that the survey respondents are still very similar to one another since they are all young UNH college students. Therefore, the differences do not appear to be as obvious, so I have the task of digging a little bit deeper.

Cluster 1 cares the most about the late night snacking attributes overall, and place the highest importance on all of the attributes except for *speed of service* and *availability of delivery* (see Appendix, section G). Actually, Cluster 2 places the highest importance on these two attributes out of all the clusters. Within Cluster 1, these respondents place the most importance, out of all the clusters, on good value, convenient location, freshness, and wide variety. They also value a wide variety of healthy options much more than the other two clusters. It should be noted that about 47% of the observations are within this cluster. As a result of this cluster's preferences, its label should be "Conscientious Snackers."

Cluster 2 is similar in some ways to Cluster 1. For example, Cluster 2 also places high importance on convenient location and good value. However, they also place the highest importance on speed of service and availability of delivery. In addition, Cluster 2 cares the least about the variety of healthy options in late night snacking stores. Consistent with Cluster 2's strong preference for convenient late night snacking activities, I will label it "Convenience Snackers." This cluster is the largest with 49% of the observations.

Cluster 3 places the least importance on all of the attributes. Within this cluster, the respondents place the most importance on availability of delivery, variety of healthy options, availability of seating, and wide variety. Nonetheless, since this group does not seem to care much about any of the attributes compared to the other two clusters, I will label this cluster as

“Indifferent Snackers.” This cluster is extremely small, so in this analysis, Cluster 3 does not hold much weight in determining the overall habits and preferences of UNH students.

As mentioned in the Data section, I also collected discrimination data from the study participants (see Appendix, section H). Some findings stood out more than others. One of the most important findings was that Cluster 1 has the healthiest eating habits. This is consistent with the fact that they place the highest importance on having a variety of healthy options. It is helpful to know that the consumers that care about the healthiness of the food also place a high importance on the other factors that have to do with selecting a place to snack late at night. This means that it is not enough to merely create or advertise a wide variety of healthy options at a food store—other aspects of the UNH-operated stores need to be improved greatly as well. Cluster 2 also has some distinct habits and preferences that should be noted. For one, Cluster 2 has the highest tendency to eat late at night more on the weekends, and probably related to this, this cluster also has the highest tendency to eat more after socializing. From experience as a college student, more socializing happens on the weekends, so this is reasonable. However, bad weather can sometimes put a damper on social times. It was found that Cluster 2’s late night snacking purchases are influenced by the weather the most. This is consistent with their label as “Convenience Snackers.” At the same time, all of the clusters are more towards the end of wanting a delivery option. This information could possibly be used to make a case for having UNH-operated stores offer delivery to on-campus dormitories and apartments.

With everything considered from the segmentation analysis, I would recommend that UNH-operated food stores target two clusters—Conscientious Snackers and Convenience Snackers. Both of these clusters are very large, so targeting them would account for the majority of the UNH population (see Appendix, section I). In addition, these two clusters have similarities

in habits and preferences, which means that they would appreciate the same types of improvements to the UNH food establishments.

iii. POSITIONING ANALYSIS

A. DATA

Next, it is necessary to understand what information was collected in the survey in order to fully understand the positioning analysis (see Appendix, section E). The positioning section of the survey follows with a series of scaled measures, similar in set-up to the segmentation one, for each of the four food establishments that will be analyzed on the basis of the same attributes described before. The four locations included in the positioning analysis are Wildcatessen, Pita Pit, DHOP, and Domino's. Pita Pit and Wildcatessen are UNH-operated stores, while DHOP and Domino's are not owned by UNH. Based on the perceptual ratings of these four locations, an analysis can be done to see how the stores are positioned in relation to one another in the minds of the customers. A Likert scale is used from 1 to 7 for the rating of each attribute, where 1 is "extremely bad" and 7 is "extremely good." There is a neutral point on the scale at 4. In the positioning section of the survey, preference ratings of respondents were asked as well. All four locations are set-up in a series of scaled measures, and respondents are instructed to circle the number on the scale that corresponds to how much they prefer each food store. The scale is from 1 to 7, with 1 indicating extremely low preference and 7 indicating extremely high preference. With the use of the perceptual and preference ratings, the positioning analysis is essential to recognize where there might be new opportunities in the local market for late night snacking.

B. ANALYSIS METHOD

Positioning analysis is used to determine how a company, brand, or product is positioned in the minds of the consumers. When a positioning analysis is conducted, a manager can more fully understand the competitive structure of their markets. There are several questions answered by the analysis, such as the following:

- How do our consumers (current or potential) view our brand?
- Which brands do these consumers perceive to be our closest competitors?
- What product and company attributes are most responsible for these perceived differences?

All of these questions must be answered in order to have a solid understanding of where the company or product stands in the minds of the consumers (Lilien et al., 2007).

The first step to a positioning analysis is to determine on which attributes the company or product should be evaluated. Preliminary research may be used to determine these attributes. Also, one must determine which competitors to include in the analysis. Without making the proper decisions about the attributes and competitors to include, it is impossible to receive an accurate and detailed analysis in return. Once all of this is resolved, consumers can indicate on a survey how they rate the companies or products based on various attributes as well as indicate their preferences on a scale.

Perceptual and preference maps are used as visual representations of the companies and products within a certain competitive market. In the “Results” section which follows, full details about analyzing perceptual and preference maps are included.

The last part of the positioning analysis is to observe where there might be an opportunity for growth and/or areas in which the company can improve. It could be possible that a certain

segment's needs and wants are unmet, or perhaps the products are not being presented and advertised in the correct way. Once conclusions are drawn about the company's weaknesses, a recommendation can be made for improvements to the product offerings as well as the marketing methods.

C. RESULTS

In order to understand how UNH- operated stores are positioned in the late night snacking market, it is necessary to dissect all parts of the positioning map (see Appendix, section J). First off, in the minds of the consumers, Pita Pit and Wildcatessen, both UNH-operated stores, are the most similar to one another. This was determined by looking at the positioning map and observing which stores' icons are the closest to each other in terms of physical distance. Using the same logic, the company icons with the largest physical distance between them would be the most dissimilar. Therefore, DHOP and Pita Pit are the most dissimilar in the minds of the consumers.

Next, the relevance of the attributes must be determined. The length of the attributes' vectors in the perceptual map estimates the relevance of the attributes. The longer the vector, the more relevant that attribute is in determining the customers' perceptions. According to this logic, the most relevant attributes are *availability of delivery*, *good value*, *potential to socialize*, *availability of seating*, *freshness*, and *variety of healthy options*. To evaluate and label dimensions, one must observe long vectors which are close in proximity to the axes themselves. The west-east axis (horizontal axis) should be labeled "Quality" because the attributes *good value*, *freshness*, and *speed of service* are close to the axis and are also long. This axis explains 30% of the total variance. The north-south (vertical axis) should be labeled "Social Atmosphere"

as the attributes that are close to the axis and long are *availability of delivery*, *availability of seating*, and *potential to socialize*. This axis explains 57.9% of the total variance. Since this dimension has higher variation, it means social atmosphere is more important than quality to students in considering late night snacking options. The total variance explained by these two dimensions is 87.9%, a very high percentage, leaving little room for any unexplained variation in the dataset by the perceptual map.

The next part of the positioning analysis involves determining in which attributes each food establishment is a strong or weak competitor. In order to determine this, an imaginary perpendicular line must be drawn from the company points to the attribute vectors. The farther the intersection of the two lines from the origin, the stronger the food place is rated for that attribute.

First, the two food stores not operated by UNH will be evaluated. Domino's rates highest on *availability of delivery*, which is no surprise since it offers quick and easy delivery services. However, it does not have a social atmosphere, which can probably be attributed to its less than ideal location in a shopping plaza off of Main Street. Also, Domino's does not have high quality in consumers' minds as it does not rate highly on attributes such as *freshness* and *good value*.

On the other hand, Durham House of Pizza has the highest level of quality, with superior ratings in *freshness*, *speed of service*, *good value*, and *convenient location*. DHOP offers deals for late night snackers, and that is why they are seen as having a very good value. Also, they have an optimal location being on Main Street, right in the middle of all the action and late night happenings. According to UNH students, they lack a variety of healthy food options, receiving the lowest rating on this attribute. Ironically, most students are not choosing the healthiest food place to dine late at night, even though they indicated on the survey that healthiness is important.

This is a very important discovery, which will need to be considered when making recommendations later.

Second, the two UNH-operated food stores will be evaluated. First of all, Wildcatessen rates second best in variety of healthy options. Yet, most UNH students are not choosing to eat there late at night. At the same time, it must be noticed that although Wildcatessen rates on the more social end of the type of atmosphere, it is still rather low. This might mean that students would rather give up a wider variety of healthier food choices in exchange for a more social atmosphere. Wildcatessen does not rate well on any of the other attributes either, which is not good for UNH.

Pita Pit rates the highest on variety of healthy food options out of all the food places included in the survey. Nonetheless, it does not possess a high *social atmosphere* rating. Thus, we recognize that there is a similar phenomenon occurring, where students are veering away from food places that do not have a social atmosphere. Similar to Wildcatessen, Pita Pit does not rate well on any of the attributes, including *good value, speed of service, freshness, convenient location, and availability of seating*.

The preference vectors indicate three distinct segments. Cluster 3 is the most distinct out of all the clusters (similar to the finding in the segmentation analysis), because the preference vectors for this segment are pointing in completely different directions than the ones for Clusters 1 and 2.

The last step of this positioning analysis is to understand the market share for these late night snacking places. In this case, I will use the share of preference, instead of first choice, rule in order to determine market share. Typically, purchasing food does not require high involvement on behalf of the consumer. This type of product is frequently purchased and is

relatively inexpensive. Therefore, it makes sense to evaluate market share in terms of how each food store relates to one another proportionally, which is how share of preference works. In relation to one another, the market shares of the food stores are as follows: DHOP has 37.27%, Domino's has 27.24%, Pita Pit has 16.42%, and Wildcatessen has 19.06%. Clearly, DHOP is the market leader out of all the choices. The two UNH-operated stores have the smaller market shares. Pita Pit, which offers the healthiest food options, has the smallest market share overall. If the UNH-operated food stores want to gain market share, then they will have to find ways to differentiate themselves as well as make improvements to their operations.

V. CONCLUSIONS

After performing the segmentation and positioning analyses for late night snacking habits and preferences at UNH, some conclusions were drawn. These conclusions will help to determine ways in which UNH food stores can improve their market share in the late night snacking scene, while still aspiring to make the campus healthier.

According to the analyses, students do not view UNH-operated stores as having high quality, even though these same stores are thought to have the widest variety of healthy options. It was also indicated that having a variety of healthy options available is an important factor to students. Since there is a gap between desires and actions, it is likely that UNH food stores are lacking some important aspects. It is likely that the inconvenient location and lack of social atmosphere in the food stores are to blame for the unpopularity. According to the survey results, convenience and social atmosphere are both essential aspects of the late night snacking scene; however, Pita Pit and Wildcatessen rate poorly on both of these important attributes. On the other hand, DHOP, a food store not operated by UNH, was indicated to have the most social atmosphere and is also conveniently located on Main Street. This could be one reason that DHOP is the most popular place for late night snacking, based on the preference vectors.

Of course it must be noted that there are limitations to the analyses performed. It is impossible to know for sure if there are differences between reported preferences and actual behaviors. According to the data in this study, there is certainly a discrepancy between what students say is important in terms of attributes and which food stores they actually prefer. In other words, UNH students indicated that having a variety of healthy options available is important to them; however, the majority of students prefer eating at places with less healthy

options. Assuming that students actually do care about having a variety of healthy options available at local food marts, it is worthwhile to think of ways to improve UNH-operated stores in a way that students are satisfied.

Another interesting finding is that the attribute *availability of delivery* seems to be the longest on the perceptual map, which means that it is a very important attribute to consumers (see Appendix, section J). The majority of UNH students indicated that they would like to have the option for delivery from UNH food stores. This also ties into the *convenience* attribute, which is vital for busy, college students.

Lastly, in the interview with a UNH manager of food stores, it was said that although there are a variety of options, including some healthy options, UNH dining is having difficulty in creating demand for the healthy food choices. Therefore, it has become evident that the problem is not that there are not enough healthy food options, but rather that UNH dining services is not using the right marketing techniques, if any, in order to pull customers into their stores for the healthy options.

VI. MANAGERIAL IMPLICATIONS/RECOMMENDATIONS

The first recommendation to the UNH dining management would be to create a more social atmosphere in their food establishments. There are a couple of different ways this could be done, but the essential part is to make more seating available. According to the survey results, the availability of seating is highly important to UNH students when they choose where to dine late at night. Students truly enjoy sitting at a table with their friends, taking their time, and being able to relax after a long week of schoolwork.

Another option in order to improve the social atmosphere of UNH food stores on weekday nights would be to have trivia nights. UNH dining could invite teams of students to participate and if a team wins the trivia night, they will receive a prize such as a free meal.

Presenting college students with deals on food is always a good idea, because they are a very price sensitive market segment due to their low income. Perhaps UNH Dining could have special deals for “late night snackers” in order to gain more market share. In addition, the deal could be for mostly healthy food items in order to be faithful to the healthy initiative for which UNH is striving. For example, if customers make a healthy purchase, such as a pita pocket, between the hours of 11 p.m. and 1 a.m., then they will receive 30% off of their pita pocket.

The final recommendation is to satisfy UNH students’ needs and wants for convenience. It would be a wise move for Pita Pit, and perhaps Wildcatessen, to offer delivery to on-campus residences. Students would be getting a convenient service, and at the same time, the UNH campus hopefully would be made into a healthier community as students choose this food store with healthy options.

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APPENDIX

A.)

Results of cluster analysis of healthy lifestyle behaviors:

	Cluster 1 Non-healthy segment means: (n = 356)	Cluster 2 Healthy segment means: (n = 162)	F	Sig.
Alcohol (servings/month)	14.74	12.31	0.54	0.462
Red meat (servings/month)	11.70	9.71	4.75	0.030
White meat (servings/month)	9.94	13.54	21.45	<0.001
Fruit and vegetables (servings/month)	11.56	44.73	867.95	<0.001
Snack chips (servings/month)	7.60	5.88	4.34	0.038
Regular soft drinks (servings/month)	12.02	4.91	15.89	<0.001
Exercise (times/month)	8.97	21.35	90.88	<0.001

(Divine & Lepisto, 2005)

B.)

Stepwise logistic regression analysis of whether or not one maintains a healthy lifestyle:

Table II Stepwise logistic regression analysis of whether or not one maintains a healthy lifestyle

Hypothesis	Type of antecedent	Predictor variable	Coeff.	Wald chi-square	Significance (one tailed)
H1	Demographics	Gender	0.41	2.88	0.045
H2		Age	0.05	18.50	< 0.001
H3		Income			NS
H4	Values	Education	0.10	4.44	0.018
H5		Fun and enjoyment			NS
H6		Security			NS
H7		Warm relationships with others			NS
H8		Sense of accomplishment			NS
H9		Self-fulfillment			NS
H10		Being well-respected			NS
H11		Sense of belonging			NS
H12		Self respect			NS
H13		Excitement	-0.12	3.14	0.038
H14	Psychographics	Locus of control			NS
H15		Temporal orientation	0.19	4.39	0.018
H16		Role overload	-0.02	4.93	0.013
H17		Stress			NS

Notes: Final model, Nagelkerke R-square = 0.159, p = < 0.001, 74.7 percent classified correctly (naive rate = 68.7)

(Divine & Lepisto, 2005)

C.)

Focus Group/Personal Interviews with UNH Students

- Please describe the UNH late night snacking experience.
- Between which hours would you say most of your late night snacking occurs?
- Why do you have snacks late at night? (studying, drinking, socializing, just hungry)
- Where do you typically go for late night snacks? – eat out, cook at home, or get food delivered, on campus or off campus?
- Why would you get food on-campus rather than off-campus? Or vice versa?
- What types of food are desirable to you late at night?
- What are the top three deciding factors for choosing a late night option?
- How do you feel about Wildcatessen, Pita Pit, DHOP, Domino's, etc?
- What do you dislike about the current late night snacking options?
- Are there any options missing from late night snacking that you wish existed?

D.)

Interview with Management of UNH Dining

- Could you describe the late night snacking experience that happens on campus?
- What is the most popular place for late night snacking on campus? (for UNH Dining in general)
- What are your most popular menu items at this popular place?
- What are your peak hours for late night snacking?
- How does the traffic of late night snacking compare to the daytime dining hours?
- What are the strengths and weaknesses of the UNH food establishments in terms of late night snacking?
- Is there something missing from the late night snacking experience? What are some ways UNH could improve on this?
- Which food places do you see as your main competition for late night snacks?
- What do you think are the three major factors for students preferring this place for late night snacking?

E.)

LATE NIGHT SNACKING SURVEY

Are you a UNH student?

- Yes
- No

Do you partake in late night snacking in Durham (including UNH or other stores on Main Street)?

- Yes
- No

If you answered “No” to either or both questions above, then do not continue with the survey.

Segmentation

1- When considering store options for late night snacking, how important are the following attributes? (circle the corresponding numbers)

	Not At All Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
Wide Variety	1	2	3	4	5	6	7
Good Value	1	2	3	4	5	6	7
Convenient Location	1	2	3	4	5	6	7
Freshness	1	2	3	4	5	6	7
Speed of Service	1	2	3	4	5	6	7
Availability of Seating	1	2	3	4	5	6	7
Potential to Socialize	1	2	3	4	5	6	7
Availability of Delivery	1	2	3	4	5	6	7
Low Calorie Intake	1	2	3	4	5	6	7
Variety of Healthy Options	1	2	3	4	5	6	7

Positioning

2- When you consider Wildcatessen for late night snacking, how does it rate on the following attributes? (circle the corresponding numbers)

		Extremely Bad	Very Bad	Somewhat Bad	Neither Good nor Bad	Somewhat Good	Very Good	Extremely Good
Wide Variety		1	2	3	4	5	6	7
Good Value		1	2	3	4	5	6	7
Convenient Location		1	2	3	4	5	6	7
Freshness		1	2	3	4	5	6	7
Speed of Service		1	2	3	4	5	6	7
Availability of Seating		1	2	3	4	5	6	7
Potential to Socialize		1	2	3	4	5	6	7
Availability of Delivery		1	2	3	4	5	6	7
Low Calorie Intake		1	2	3	4	5	6	7
Variety of Healthy Options		1	2	3	4	5	6	7

3- When you consider Pita Pit for late night snacking, how does it rate on the following attributes? (circle the corresponding numbers)

		Extremely Bad	Very Bad	Somewhat Bad	Neither Good nor Bad	Somewhat Good	Very Good	Extremely Good
Wide Variety		1	2	3	4	5	6	7
Good Value		1	2	3	4	5	6	7
Convenient Location		1	2	3	4	5	6	7
Freshness		1	2	3	4	5	6	7
Speed of Service		1	2	3	4	5	6	7
Availability of Seating		1	2	3	4	5	6	7
Potential to Socialize		1	2	3	4	5	6	7
Availability of Delivery		1	2	3	4	5	6	7
Low Calorie Intake		1	2	3	4	5	6	7
Variety of Healthy Options		1	2	3	4	5	6	7

4- When you consider DHOP (Durham House of Pizza) for late night snacking, how does it rate on the following attributes? (circle the corresponding numbers)

		Extremely Bad	Very Bad	Somewhat Bad	Neither Good nor Bad	Somewhat Good	Very Good	Extremely Good
Wide Variety		1	2	3	4	5	6	7
Good Value		1	2	3	4	5	6	7
Convenient Location		1	2	3	4	5	6	7
Freshness		1	2	3	4	5	6	7
Speed of Service		1	2	3	4	5	6	7
Availability of Seating		1	2	3	4	5	6	7
Potential to Socialize		1	2	3	4	5	6	7
Availability of Delivery		1	2	3	4	5	6	7
Low Calorie Intake		1	2	3	4	5	6	7
Variety of Healthy Options		1	2	3	4	5	6	7

5- When you consider Domino's for late night snacking, how does it rate on the following attributes? (circle the corresponding numbers)

		Extremely Bad	Very Bad	Somewhat Bad	Neither Good nor Bad	Somewhat Good	Very Good	Extremely Good
Wide Variety		1	2	3	4	5	6	7
Good Value		1	2	3	4	5	6	7
Convenient Location		1	2	3	4	5	6	7
Freshness		1	2	3	4	5	6	7
Speed of Service		1	2	3	4	5	6	7
Availability of Seating		1	2	3	4	5	6	7
Potential to Socialize		1	2	3	4	5	6	7
Availability of Delivery		1	2	3	4	5	6	7
Low Calorie Intake		1	2	3	4	5	6	7
Variety of Healthy Options		1	2	3	4	5	6	7

6- Please indicate how much you prefer each food establishment for late night snacking by circling the corresponding numbers -- higher numbers indicate increased preference. In other words, 1 = extremely low preference and 7 = extremely high preference.

Wildcatessen	<input type="text"/>	1	2	3	4	5	6	7
Pita Pit	<input type="text"/>	1	2	3	4	5	6	7
DHOP (Durham House of Pizza)	<input type="text"/>	1	2	3	4	5	6	7
Domino's	<input type="text"/>	1	2	3	4	5	6	7

Additional Information

Please indicate your level of agreement with the following statements by circling the corresponding numbers:

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I like to go out and socialize with my friends.	<input type="text"/>	1	2	3	4	5
My mood determines the type and amount of food I am eating.	<input type="text"/>	1	2	3	4	5
I will not walk to get food when the weather conditions are poor.	<input type="text"/>	1	2	3	4	5
I tend to eat more at night on weekends than on weeknights.	<input type="text"/>	1	2	3	4	5
I tend to eat healthier and low calorie snacks at night.	<input type="text"/>	1	2	3	4	5
I like to eat flavorful (salty or sweet) food at night.	<input type="text"/>	1	2	3	4	5
I tend to eat more at night after I go out with my friends.	<input type="text"/>	1	2	3	4	5

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I tend to eat more at night when I am studying.	1	2	3	4	5
I only make late night snacking purchases with my dining dollars.	1	2	3	4	5

Would you like the option to have food delivered to you late at night from on-campus stores?

- Yes
- No

Please indicate your gender.

- Female
- Male

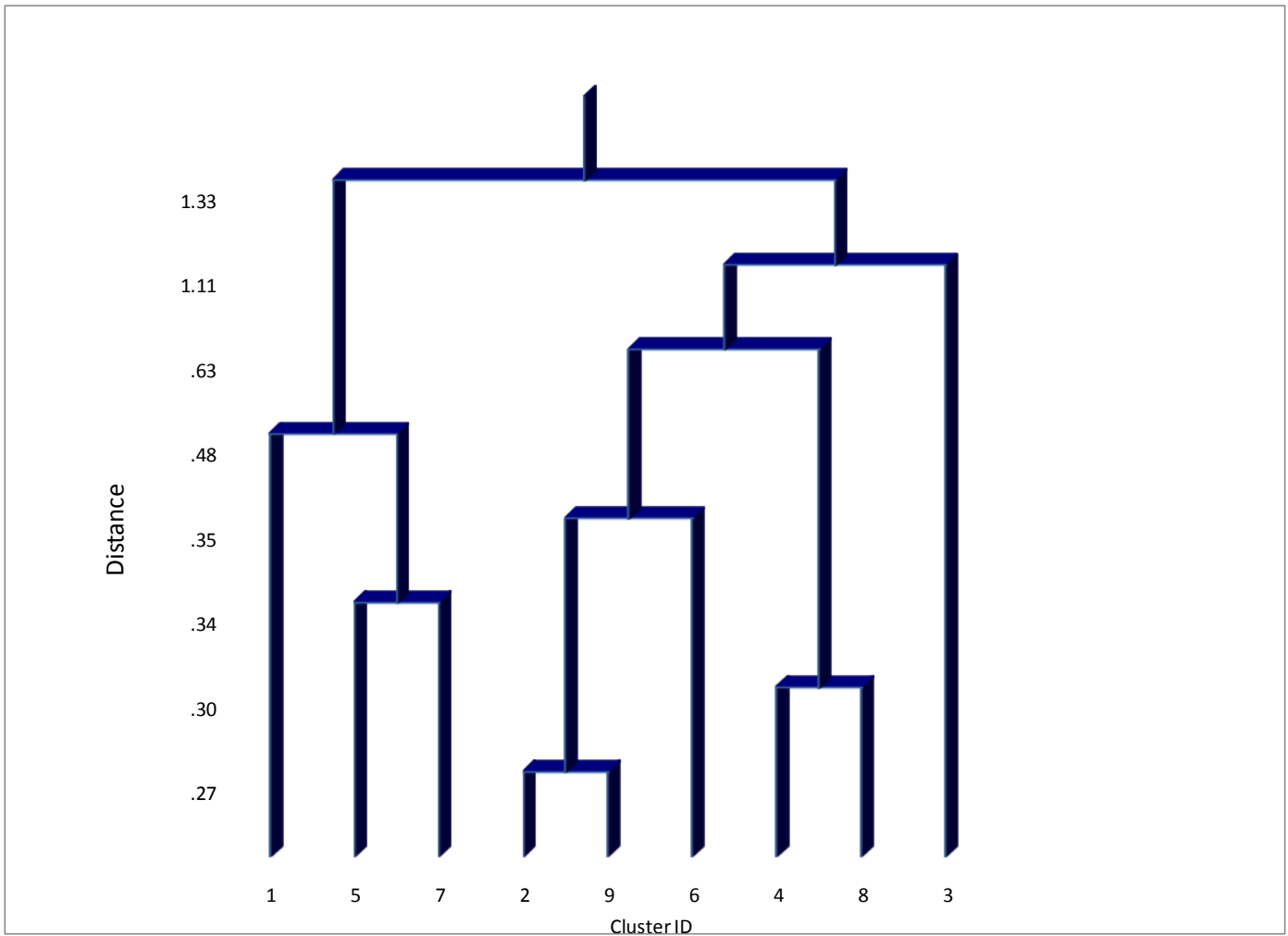
In what kind of building do you reside during the school year?

- UNH Dormitories
- On-campus apartments
- Off-campus apartments
- Fraternity or Sorority Building
- A House

Which category best describes you?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student

F.)



G.)

Segmentation variable / Cluster	Overall	Cluster 1	Cluster 2	Cluster 3
Wide Variety	4.72	5.62	3.98	3
Good Value	5.6	6.1	5.33	2.67
Convenient Location	6.16	6.38	6.24	2.33
Freshness	5.16	5.88	4.67	2.67
Speed of Service	5.55	5.57	5.76	2.33
Availability of Seating	3.78	4.35	3.29	3
Potential to Socialize	4.53	4.75	4.45	2.67
Availability of Delivery	4.84	4.68	5.07	3.67
Variety of Healthy Options	3.66	4.75	2.62	3.67

H.)

Discriminant variable / Cluster	Overall	Cluster 1	Cluster 2	Cluster 3
Gender (F=1)	1.482	1.575	1.381	1.667
Place of Residence (1-5)	2.635	2.425	2.857	2.333
Class (1-5)	3.294	2.925	3.667	3
Delivery Option (Yes=1)	1.141	1.15	1.119	1.333
Like to socialize	4.635	4.65	4.619	4.667
Mood determines food	3.518	3.725	3.357	3
Weather influences purchases	3.659	3.525	3.81	3.333
Eat late more on weekends	4.012	3.675	4.333	4
Healthy eating habits	2.094	2.325	1.857	2.333
Like flavorful food	3.753	3.75	3.81	3
Eat more after socializing	4.212	4.075	4.357	4
Eat more when studying	2.565	2.65	2.5	2.333
Only use Dining Dollars	2.047	2.325	1.738	2.667

Breakdown of discriminant variables coding

Gender: 1 = Female, 2 = Male

Place of Residence: 1 = UNH Dormitories, 2 = on-campus apartments, 3 = off-campus apartments, 4 = Fraternity or Sorority Building, 5 = A House

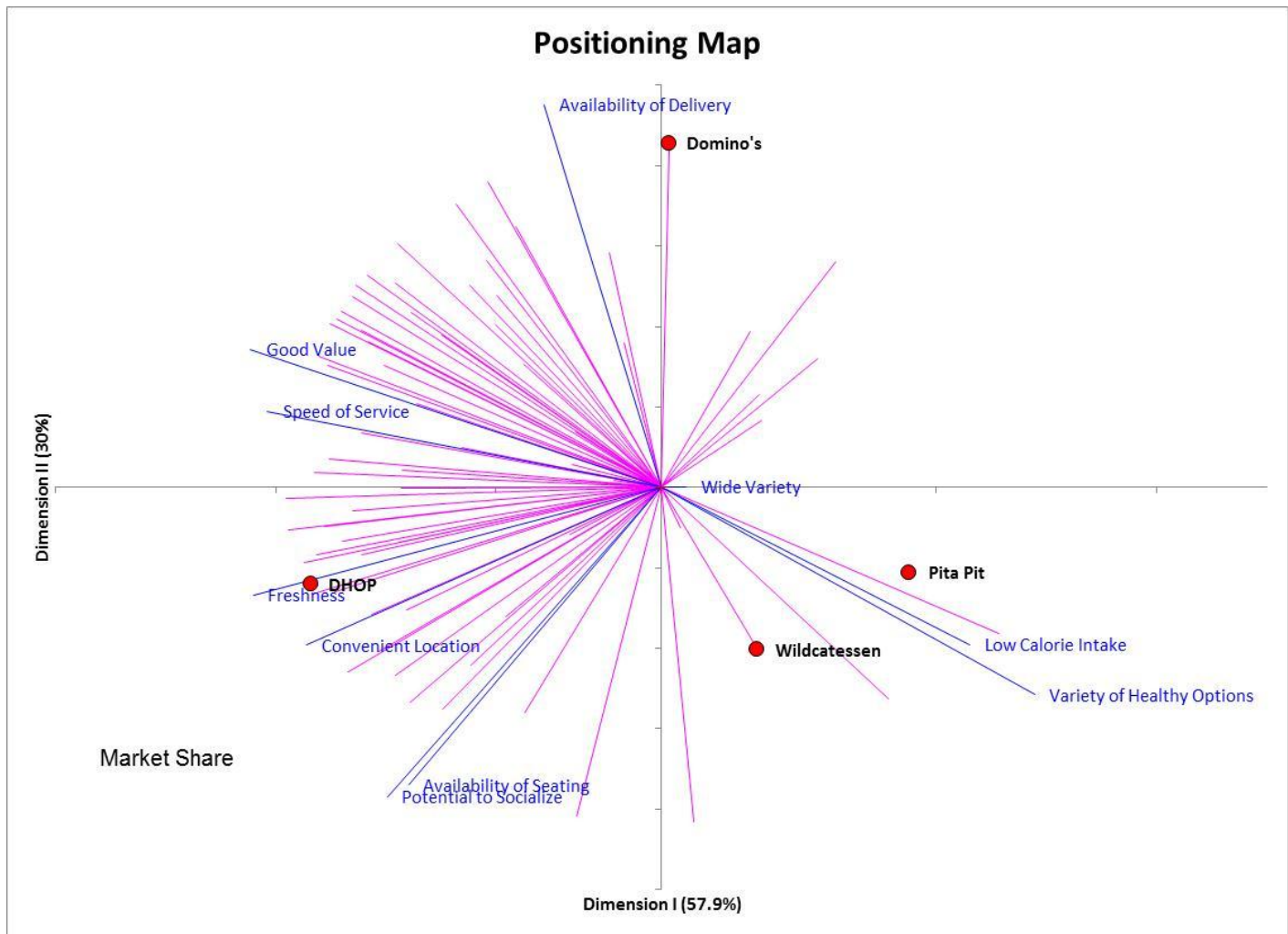
Class: 1 = Freshman, 2 = Sophomore, 3 = Junior, 4 = Senior, 5 = Graduate Student

Delivery Option: 1 = Yes, 2 = No

I.)

Size / Cluster	Overall	Cluster 1	Cluster 2	Cluster 3
Number of observations	85	40	42	3
Proportion	1	0.471	0.494	0.035

J.)



IRB APPROVAL

University of New Hampshire

Research Integrity Services, Service Building
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01-Dec-2011

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GSS Box 9677
Durham, NH 03824

IRB #: 5309

Study: Senior Honors Thesis: Late Night Snacking

Approval Date: 01-Dec-2011

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved the protocol for your study as Expedited as described in Title 45, Code of Federal Regulations (CFR), Part 46, Subsection 110.

Approval is granted to conduct your study as described in your protocol for one year from the approval date above. At the end of the approval period, you will be asked to submit a report with regard to the involvement of human subjects in this study. If your study is still active, you may request an extension of IRB approval.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the attached document, *Responsibilities of Directors of Research Studies Involving Human Subjects*. (This document is also available at <http://unh.edu/research/irb-application-resources>.) Please read this document carefully before commencing your work involving human subjects.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or Julie.simpson@unh.edu. Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,



Julie F. Simpson
Director