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A Study of UT Student's Views on Local Stores

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UNIVERSITY HONORS PROGRAM

SENIOR PROJECT - APPROVAL

Name: Lauren Abbott
College: Business Admin. Department: Statistics
Faculty Mentor: Mary Leitnaker
PROJECT TITLE: A Study of UT Students' Views on Loca
Stores
I have reviewed this completed senior honors thesis with this student and certify that it is a project commensurate with honors level undergraduate research in this field.
Signed: Mary 9. Leitraher, Faculty Mentor Date: 5/5/03
Date: 5/5/03
Comments (Optional):

Lauren Abbott

"A Study of UT students' Views on Local Stores"

Senior Honors Project

Spring 2003

Faculty Mentor: Dr. Mary Leitnaker

For the past four years, I have been working on a bachelor of science in business administration with a concentration in statistics. This summer I will begin working on a master of marketing research. For my project, I wanted to do something that would give me experience in the field of marketing research, while at the same time use my statistical background. Therefore, I decided to do a survey concerning shopping behavior.

The group I chose to target was UT students. I chose this group for a couple of reasons. First of all, since the student body makes up a large part of Knoxville's population, retail stores must consider this large group when deciding how to position themselves. Knoxville is comprised of around 174,000 people. Of these, approximately 26,000, or roughly 15%, are University of Tennessee students. It can easily be seen that the student population alone can have a large impact on the success or failure of a business. Through my project, I was hoping to collect some data that could possibly help local stores understand how students viewed them. Second, being a college student myself, I was interested in seeing if other students felt the same way I did about the local stores.

The main store I wanted to focus on was Target. Target is often viewed as a trendy store that is geared towards younger shoppers. Therefore, one would naturally think that it would be the store of choice for many college students. However, I wanted to find out for sure. Target can be classified as a general merchandise store, which puts it in competition with Wal-Mart, K-Mart, Walgreen's, and several other general stores. I was interested in finding out whether college students actually viewed Target as a general store, or rather a place to go only for certain items.

In order to come up with the questions for my survey, I first thought of things that I was interested in knowing. There turned out to be plenty because not only was I a regular shopper at

Target, but I had also been employed as a cashier for the last year and a half. Actually, it turned out that I had too many questions on my survey. I was still not sure about how the survey was going to be administered, but I knew length would be an important issue in determining the response rate.

After reviewing the rough draft of my survey and going over it with my mentor, I decided I was going about it the wrong way. Rather than thinking of random things I was personally interested in knowing, I should put myself in the role of the store manager at Target. I should try to imagine what type of information he or she would want to know concerning the UT student body. I should also try to focus on one main idea and drastically shorten the survey. I decided to focus on whether or not students shopped at Target, why they did or didn't, and what types of items they typically bought at Target. This accomplished both of my goals — it achieved information that would be useful for a manager at Target, and it was short enough to get a good response rate.

To assure the questions were worded correctly to get the kind of information sought after, I had to do a pre-test. This was simply done by administering the survey to several of my friends. After questioning them, I realized everyone was saying that they did shop at Target. However, I wasn't finding out if that was where they did most of their shopping or if they just occasionally shopped there. Some people replied sometimes, but with the way my survey was worded, that went down as a "yes". Therefore, I decided to re-word the first question and came up with another draft.

A second pre-test determined that this draft had problems as well. With the new wording of the first question, everyone was saying they did not use Target as their primary general merchandise store. This was useful information, but it wasn't quite enough. On my survey, this

caused the first answer to be "no" and made it appear as if no one even shopped at Target. I knew this wasn't the case. Perhaps students shopped at Target for specific items even if it wasn't their primary general merchandise store. As the survey was, there was no way to find this out. So, I added a couple of more questions concerning this issue, and I had a final draft of the survey. Once again, I tried it out on a few people, and this one seemed okay.

So I had my survey, next I needed to figure out the sample size needed to obtain in order to be representative of the entire student body. Normally in constructing a survey, we want to end up with a very narrow confidence region. However, for my survey, I was working alone and I had to allow a 10% bound on my estimated confidence intervals. This was due to constraints of time, money, and resources. Using this bound of confidence, I would need to get a sample of 100 students to complete my survey. This meant that I would be 95% confident that my results were within 10% of the actual values. Although a much larger sample size would have been beneficial, due to the constraints listed earlier, I was only able to get 100. I decided that for my purposes, this would be sufficient. It probably wouldn't be enough to publish my findings, but it would be enough to give me some experience in the field and an understanding as to what all goes into conducting a survey.

The next steps were to decide on a method for administering the survey, and a method for choosing my sample. I had originally though I could simply give the survey to my friends and people in my classes. However, I soon realized that kind of sampling would not be very representative of the entire student body. I had to come up with a way to get a truly random sample. If my sample was completely random, I would be able to get a pretty good estimation about the entire student population - even with my small sample size.

There were several options I explored in order to achieve a random sample. First, I could randomly choose classes out of the spring timetable, go to the classes chosen, and have the survey filled out by 20-25 people from each class. I decided against this option because of conflicts with my own schedule. I would not have been able to go to any classes that met at the same time as any of mine, therefore defeating the randomness. The next idea was to randomly choose names out of the student directory, email the survey to the students chosen, and wait for a response. I decided against this option as well simply because I was afraid of a low response rate. There is so much junk email sent out, I thought people would probably delete the email without even reading it. With this option, there was also the concern of response wait time. Most people probably would not respond immediately, causing the whole process to take longer than the time I had. Another option was to randomly choose numbers from the student directory, call the students chosen, and administer the survey over the telephone. An additional option I considered was to combine the phone and email method. A friend of mine created a website containing the survey so I could email the link to people. I could randomly choose people to call, ask them to participate, and give them the choice to do so on the phone or on the internet. I decided against this one as well. I thought that if people were already on the phone, it would be better to go ahead and have them do the survey than to ask them to go through another step. I decided to do the survey completely over the telephone.

By choosing random numbers out of the student directory, I was including everyone registered as a student at the University of Tennessee, including graduate students and students not living in Knoxville. I used Microsoft Excel to generate three columns of 100 random numbers. The first column was a page number (47-239), the second a column number (1-4), and the third a position number (1-35). I went through the directory and circled all of the phone

numbers coinciding with the random numbers. If a particular column did not have as many positions as required by the fourth number, I would continue counting in the next column.

I first tried calling the numbers on a weeknight between 5:00 and 6:30. Numbers that were no longer in service, incorrect, or where the recipient did not want to participate were crossed off. Those who gave responses were highlighted, so I would know not to call back. If no one answered or the line was busy, I put a mark next to the number and continued with the next one. To give the people not home or busy a second chance, on a different weeknight and at a later time in the evening, I called all of the numbers that had a mark beside them. Some of these responded, some were crossed off, and some had a second mark added next to the number. After calling all 100 numbers chosen, and some of them twice, I still needed more responses. So, I chose 100 new random phone numbers with the same method used previously. These were also marked or crossed off like the first list depending on the response. Again, on a different weeknight and at a later time in the day, I called the people from the second list who had a mark next to their number. By the end of this process for the second list, I still did not have 100 responses. However, I did have several numbers from the first and second lists that had two marks beside their number. Since I had not been able to reach these people on a weeknight through two separate attempts, I tried them on a Sunday night. I went through the first list first and then the second list. If there was no answer after the third attempt at reaching these people, I crossed them off. At this point, all 200 random numbers had been either highlighted or crossed off, but I was still lacking a few responses. On the next night, I chose 40 more random numbers and got the remaining responses needed.

A lot of work went into giving people several chances to participate. However, this was an extremely important part of the survey. Had I only given students one chance to participate, I

would have inadvertently entered bias into the survey. By trying to call someone on different weeknights, and at different times of the day removed any unintended bias that could have been entered by not being able to reach people who weren't home at certain times. For example, had I only tried calling students on Mondays at 6:00, I would have ruled out everyone who had a night class at that time. However, those students might be available on Tuesdays or on the weekends. I made sure everyone had an equal opportunity for being reached.

Although I had completed the gathering of my data, I had noticed a couple of flaws with the process. First, the student directory is not totally complete or updated. There were several names without phone numbers, causing me to choose whether or not to count them when getting my sample or to skip over them. Although I randomly selected numbers from the directory, some bias was inadvertently entered by not being able to reach people who did not have phone numbers listed. Had the people without phone numbers been chosen, I would have had to automatically cross them out due to the way I was administering the survey. I chose to count those as positions when choosing my sample, however. Luckily, none of those without listed numbers were randomly chosen. The fact that the directory is not completely updated also adds bias. Each year, students have to update their address and phone number with the student service office. If they don't, and I discovered this applies to many students, their home phone number and address will be in the directory. Therefore, while trying to call students, I reached several parents. These numbers had to then be crossed off, seeing as how the parents weren't too eager to give their child's current number to a person giving a survey.

The second flaw I found was in the survey itself. Although I asked the people who said

Target was not their primary general merchandise store how often they did go to Target, I did not

ask this of the people who said they did regularly shop there. A second question that would have

been good to include would be how much regular Wal-mart shoppers spend in a visit. I found out this information for the regular Target shoppers, but had I done the same for those who shop at Wal-Mart, I could have compared the two. Neither of these questions were absolutely necessary for the study, but it could have been useful information. This was something that should have been seen during a pre-test, but somehow I missed it.

So I had all of my data, and I was ready to start interpreting it. The survey resulted in 40 male responses and 60 female responses, which is pretty close to the real distribution of UT students. In actuality, the UT student body is comprised of 47% males and 53% females. This illustrates the fact that by taking a purely random sample, I was able to obtain a fairly good representation of the student body. On the following pages are the results I obtained.

1. What store do you use as your primary general merchandise store?

1	arget	Wa	al-Mart	Other			
#	%	#	%	#	%		
lents							
16	.16 +/07	79	.79 +/08	5	.05 +/01		
	9 – 23%		71 - 87%		4-6%		
5	.13 +/11	33	.83 +/12	2	.05 +/07		
	2 - 24%		71 - 95%		0-12%		
11	.18+/10	46	.77+/11	3	.05+/06		
	8 – 28%		66 – 88%		0-11%		
	# lents 16	16 .16 +/07 9 - 23% 5 .13 +/11 2 - 24% 11 .18+/10	# % # lents 16 .16 +/07	# % # % lents 16 .16 +/07	# % # % # lents 16 .16 +/07		

2. What is it about Wal-Mart that you prefer over Target? (Asked of those who said they used Wal-Mart as their primary general merchandise store)

	Location/ Convenience		Prices		Habit			lection	Other*		
Total	#	%	#	%	#	%	#	%	#	%	
All Studer	nts										
79	30	.38 +/11	24	.30 +/10	12	.15 +/08	8	.10 +/07	5	.06 +/05	
		27 – 49%		20 – 40%		7 – 23%		3 - 17%		1 – 11%	
Male											
33	17	.44 +/17	4	.12 +/11	5	.15 +/12	4	.12 +/11	3	.09 +/10	
		27 – 61%		1 – 23%		3 - 27%		1 – 23%		0 – 19%	
Female											
46	13	.28 +/13	14	.30 +/- 14	5	.11 +/09	6	.13 +/10	3	.07 +/07	
		15 – 41%		16 – 44%		2 – 20%		3 – 23%		0 – 14%	

^{*} Don't know, bad experience at Target

3. Do you feel that Wal-Mart or Target's advertising appeals more to college students? (Asked of those who said they used Wal-Mart as their primary general merchandise store)

	V	al-Mart	T	arget	No Opinion		
Total	#	%	#	%	#	%	
All Students							
79	20	.25 +/10	50	.63 +/11	9	.11+/07	
		15 – 35%		52 – 74%		4 – 18%	
Male							
33	12	.36 +/17	14	.42 +/17	7	.21 +/14	
		19 – 53%		25 – 59%		7-35%	
Female							
46	8	.17 +/11	36	.78 +/12	2	.04 +/06	
		6 – 28%		66 – 90%		0-10%	

4. Are there any specific items that you would go to Target to buy? (Asked of those who said they used Wal-Mart as their primary general merchandise store)

		No	Clothes		Electronics			ome Dec.	Other*	
Total	#	%	#	%	#	%	#	%	#	%
All Students	28	.35 +/11	17	.22 +/09	14	.18 +/09	7	.09 +/06	13	.16 +/08
		24 - 46%		13 – 31%		9 – 27%		3 – 15%		8 – 24%
Male 33	24	.72 +/16	2	.06 +/08	6	.18 +/13	0	N/A	1	.03 +/06
		56 - 88%		0 – 14%		5 – 31%		0%		0-9%
Female 46	4	.09 +/08	15	.33 +/14	8	.17 +/11	7	.15 +/11	12	.26 +/13
		1 – 17%		19 – 47%		6-28%		4 – 27%		13 – 39%

^{*} Towels, Furniture, Shoes, Pet Supplies, Stationary, Accessories, Make-up

5. On average, how much do you spend in one visit to Target? (Asked of those who said they used Target as their primary general merchandise store)

	<\$30		\$31-40		\$	41-50	\$	51-60	>\$60		
Total	#	%	#	%	#	%	#	%	#	%	
All Student 16		.25 +/22	4	.25 +/- /22	2	.13 +/17	3	.19 +/20	3	.19 +/20	
		3 – 47%		3 – 47%		0 - 30%		0 - 39%		0 - 39%	

6. What is it about Target that you prefer over similar stores such as Wal-Mart or K-Mart? (Asked of those who said they used Target as their primary general merchandise store)

	A	tmosphere	Convenience		Selection		Quality		Sto	re Layout	Prices	
Total	#	%	#	%	#	%	#	%	#	%	#	%
All Stud		.31 +/23	3	.19 +/20	3	.19 +/~ .20	3	.19 +/20	1	.06 +/12	1	.06 +/12
		0 - 54%		0 - 39%		0 - 39%		0 - 39%		0 – 18%		0 – 18%

When trying to interpret the results, it became clear how important it is to have a large sample size. Because my sample size was so small, the intervals for the percentages are very wide. Had I been able to get a larger sample, the intervals would have been narrower, and better estimates could have been made. Having such wide intervals kept me from making estimates as close to the truth as I would have liked. However, I was able to get a general idea about UT students' feelings about some of the local stores.

Right away it was clear that most UT students use Wal-Mart as their primary general merchandise store rather than Target. This was true with both males and females. Contrary to what I thought, most students do not view Target as a general store. However, when asked whether they would go to Target for any specific items, most replied that they would. After breaking this down into males and females, it became apparent that in general, females are more likely to make a special trip to Target for specific things, especially clothes. Males, on the other hand, tend to do all of their shopping at one particular store, only going to another one if absolutely necessary.

Originally I expected there to be a connection between advertising and the store where people chose to shop. However, through this study, I found out that even though most students shop at Wal-Mart, the majority of those people think Target's advertising appeals more to college students. So what was it that drew everybody to Wal-Mart? Most students who shop at Wal-Mart said they did so because Wal-Mart was closer and more convenient. The next highest response was that Wal-Mart has lower prices. Then there was also a large group that said they just went to Wal-Mart because that's where they had always gone.

Originally, the survey was planned to find out how students feel about Target. However, from the responses, it ended up being more about Wal-Mart. Because so few people said that

they actually did use Target as their primary general merchandise store, the intervals were even wider. This made it difficult to really come up with many conclusions about Target. However, I did discover that on average, student Target shoppers usually spend less than \$40 per visit. The responses as to why they shop at Target were pretty evenly spread out, but the reason with the most responses was atmosphere. This included cleanliness, amount of clutter, and just the overall feeling of the store.

Although the results were not as precise as I would have liked, they were as precise as I could get given my small sample size. I had chosen a 10% bound for my confidence intervals, and most of the estimates were within these limits. By doing this survey, I have been able to come up with a couple of recommendations for Target, concerning their position with UT students. Target might be content with being considered a store for certain items. However, if Target is interested in being viewed as a general store, they needs to do something different. As we saw earlier, they are doing a good job with their advertising – it appeals to college students more than Wal-Mart's. Yet, there are obviously other factors contributing to students' decisions on where to shop. The main reason people said they shop at Wal-Mart was because of convenience and location. In Knoxville, Target and Wal-Mart are not very far apart from each other. But, Wal-Mart is right off of the interstate and is very visible. Target on the other hand, is hidden on a road parallel to Kingston Pike. You pretty much have to know it's there to even notice it. Perhaps Target could work on making itself more noticeable. They could put additional signs up showing where they are located.

The second reason students prefer Wal-Mart is because of the lower prices. As everybody knows, college students are always concerned about money. Therefore, they will usually shop at whichever place has lower prices. Low prices are one thing that Wal-Mart

heavily stresses in their advertising. There are some areas, though where Target has prices just as low. My second recommendation for Target is that they should point this out in their advertising. They are already doing a good job at reaching the college market. If they could add something about prices into their ads, they might attract even more.

From doing this survey, I was able to learn several things about how students view local stores. I also feel, though, that I was able to learn several things about marketing research as well. First of all, the larger the sample size, the better the results will be. With a larger sample, the intervals will be smaller, and you can make a much better estimate. Second, it is extremely important to have a purely random sample. This is especially true when the sample size is small. It is impossible to talk to every person in your target group, but you can make sure you have a good representation. Third, performing a pre-test is very important when doing a survey. Had I not done this, I would not have gotten the results I wanted. It took several tries before I was satisfied with the survey. As I mentioned earlier, I still missed a couple of questions. Perhaps if I had done more pre-testing, I would have ended up with an even better survey. And finally, no matter how hard you try, there will most likely be bias entered into your survey in some way. However, if you recognize this fact, it is something you can deal with. You just have to take it into consideration when interpreting the results. Overall, I feel that this project gave me a good idea as to what goes into marketing research.

Appendix

1.	Age:	
2.	Sex: M F	
3.	How often do you shop at Target? Several times a week Once a week Once a month Several times a month Only when I need something	
4.	On average, how much do you spend in one visit to Target? <\$30 \$30-50 \$50-75 \$75-100	>\$100
5.	Which department do you typically make purchases in? Women's Clothing Men's Clothing Children's Clothing Shoes Sporting Goods Toys Chemicals Electronics_ Health/Beauty Home/Office_ Appliances Housewares/Domestics	Seasonal Market Storage Hardware Small
6.	 a) Have you ever purchased electronics at Target? Yes b) If yes, why did you buy the item(s) at Target rather than a store or Circuit City? Cheaper Convenience Availability Other 	like Best Buy
7.	Do you ever go into Target specifically to make a purchase at the C Photo, Pharmacy, or Optical department? Yes	
8.	How often have you made a purchase at Food Avenue? Every visit to Target A few times Never	
9.	What is your opinion about Target's return policy? It's fine It's too strict No opinion	
10	O. a) Has anyone ever explained what a gift receipt is? Yes	No
	b) If yes, do you use them when giving gifts? Yes	No
11	. If you have ever needed assistance, was it easy / hard to find some you?	eone to help
12	2. On a scale of 1-5 with 1 being poor and 5 being excellent, how wor friendliness/helpfulness of the Target employees? 1 2 3 4 5	uld you rate the

3. Do you have an easy / hard time locating items you're looking for in Target?
14. Do you usually go to Target with specific items in mind / just to browse?
15. Does the sale paper each week have any effect on what you buy? Yes No
16. Do you always / sometimes / hardly ever have to wait in line behind more than 3 people at the check-out lines?
17. a) Have you ever shopped at a Super Target? Yes No b) If yes, do you prefer Target or Super Target ?
21. Are there always / sometimes / hardly ever shopping carts available at the front door?
22. Is the parking lot always / sometimes / hardly ever cluttered with shopping carts?
23. a) Have you ever used the wedding or baby registry to purchase a gift? Yes No b) If yes, how would you rate the system on ease of use? 1 2 3 4 5
24. Are the dressing rooms always / sometimes / hardly ever clean?
25. How would you rate the friendliness/helpfulness of the operator? 1 2 3 4 5
26. a) Have you ever applied for a Target Guest Card or Target Visa? Yes No b) If yes, have you been pleased with the card? Yes No
27. Does there usually seem to be too many / not enough / the right number of cashiers working?
28. a) Have you ever spoken with a manager? Yes No b) If yes, how approachable/helpful would you rate him or her? 1 2 3 4 5
29. Have you ever noticed whether or not there is music playing at Target? Yes No
30. Do you think background music adds to / subtracts from / doesn't affect your shopping experience?

31.	If Target sold cigarettes, do you think it would increase their overall business?
	Yes No No opinion
32.	Do you typically leave Target with more / less / exactly what you meant to?
33.	How would you rate your overall experience at Target?
	1 2 3 4 5

1. Do you shop at Target?

- \underline{NO} 2. What store do you typically shop at that offers similar items?
- 3. What is it about that store that you prefer over Target?
- 4. Do you feel that Target's advertising appeals to college students?

YES

- 2. What type of items do you typically buy at Target?
- 3. On average, how much do you spend in one visit to Target?
- 4. What is it that you like about Target as opposed to similar stores such as Wal-Mart or K-Mart?
- 5. Do you feel that Target's advertising appeals to college students?

1. Do you use Target as your primary general merchandise store?

NO

- 2. What store do you typically shop at that offers similar items?
- 3. What is it about that store that you prefer over Target?
- 4. Do you feel that store's or Target's advertising appeals more to college students?

YES

- 2. What type of items do you typically buy at Target?
- 3. On average, how much do you spend in one visit to Target?
- 4. What is it that you like about Target as opposed to similar stores such as Wal-Mart or K-Mart?
- 5. Do you feel that Target's advertising appeals to college students?

5.	M F
6.	Do you use Target as your primary general merchandise store?
<u>NC</u>	<u>.</u>
7.	What store do you typically shop at that offers similar items?
8.	What is it about that store that you prefer over Target?
9.	Do you feel that store's or Target's advertising appeals more to college students?
10.	Are there any specific items that you do go to Target to buy? (e.g. clothes, shoes home decorations)
6.	How often do you do so?
YE	
6.	What type of items do you typically buy at Target?
7.	On average, how much do you spend in one visit to Target?
8.	What is it that you like about Target as opposed to similar stores such as Wal-Mart or K-Mart?
5.	Do you feel that Target's advertising appeals to college students?