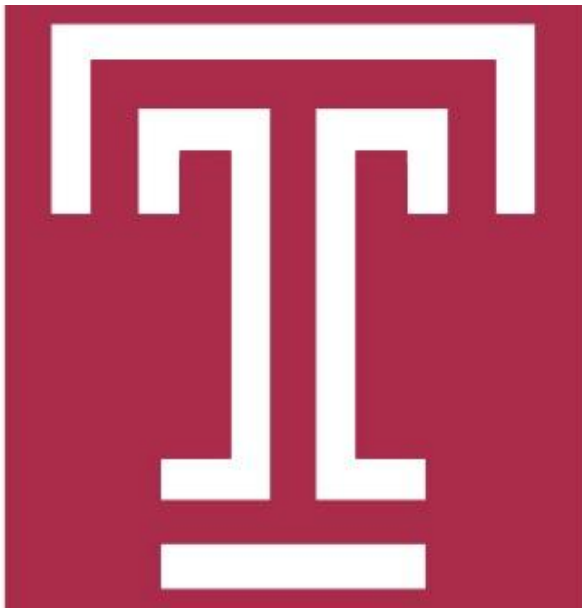# McDelivery at Temple

University

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1. Background and Objectives

Research Topic:

Implementing McDelivery services in McDonald's nearest Temple University

Background:

By conducting a situational analysis, McDonald's located and identified a new market opportunity. The idea is to offer a new service of delivery, called McDelivery, to the students of

Temple University in Philadelphia to cater with their frantic and fast-paced lifestyles. The McDonald's McDelivery service has been implemented in upwards of 25 cities across the world, including New York City. With the history of success that the McDelivery service has had, the owners decided to enter the Philadelphia market by focusing on students. Since this is a new project and the company has never proposed a similar service in Philadelphia, they cannot only base their decision on past experience, managerial judgment or internal record systems. Therefore, this opportunity situation requires more information before an appropriate plan and action can be developed. Thus, initiating a research process and using its practices and techniques to make the decision is the best option. The results of a marketing research process help provide meaningful and accurate information that companies can use to decide on implementing something they had the intention/idea of working on. Marketing research also helps companies make the right decision and reduce the risks of failure and money loss. As marketing researchers, we will follow the stages that characterize any market research operation for collecting information in order to find out if a McDelivery Service near Temple University can be found to be profitable.

Project Summary:

The purpose of this research is to determine if there is a market for a McDonald's Delivery system, McDelivery, at Temple University. This research will address the preferences of Temple Students when they order food, as well as their opinion of the McDelivery system.

McDelivery:

- A 24-hour, 7-day-a-week service, that began in Singapore in 2005 and has been successfully growing and expanding in countries such as India, Kuwait, Pakistan, Egypt, and more.
- Currently offers services in several locations around New York.
- There are currently 10 McDonald's locations around Temple University, with the closest one only being 2-blocks away. (Table 1: Nearby McDonald Locations)

Temple University:

- Currently 11,000 students live on/around campus (28,000 students total).
- Time and effort has caused students to rely on delivery systems for quicker access to fast food meals.

Should McDonald's provide a McDelivery service at McDonald's near Temple University?

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Research Objectives:

- Discovering students' interest about the project and their willingness to use the service.
- Determining if this new service is really an opportunity that is worth implementing.
- Understand students' perception of convenience (in restaurant eating, take out…).
- Discovering if on campus or off campus living students will be more or less likely to use the McDelivery service.
- Discovering whether or not students' customers will like the service of delivery before introducing it.

2. Hypothesis

We sought to test the following null hypothesis

1. McDelivery System will have no effect on student likelihood of purchasing McDonald's.
2. There is no relationship between a student's year of study and the amount they are willing to pay.
3. There is no relationship between three variables of delivery attributes (Delivery Time, Delivery Charge, Customer Service) how much people are willing to pay.

3. Data collection approach and sampling

Research Design:

In order to learn more about Temple students food delivery habits, primary data is required. An online survey is our approach to collecting this data. The survey focuses on the how often the respondents order delivery, what kind of food they order, and what attributes they value the most in a delivery establishment. The survey also asks the respondent specifically

about how a McDelivery System could influence the likelihood of them ordering McDonald's

and how much they were willing to pay for that service.

- Our survey contains 22 questions. (20 multiple choice, 2 open ended)
    - The two open ended questions below helped attempted to gain further insight into our respondents views on McDonald's.
        - "Why have you not even at McDonald's in the last month?"
        - "What is your opinion of McDonald's?"

Data Collection Method:

We constructed are survey using Qualtrics and then circulated the link to Temple students using:

- TUMail
- Facebook
- Blackboard

Whenever a student responded to our survey the outputs were compiled in Qualtrics awaiting our analysis.

Sample Size and Data Collection Method:

- Population: 28,000 Temple University undergraduate students
- Sample Size: 51 completed surveys

We used SPSS to interpret our results and test our hypothesis

- Using SPSS we ran:
    - One Sample T-Test
    - One Way ANOVA

○ Regression Analysis

These tests will be discussed further in the Data Analysis and Statistical Tests section

4. Data Analysis and Statistical Tests

Hypothesis 1:

McDelivery System will have no effect on students likelihood of purchasing McDonald's

- This hypothesis contains one variable, "McDelivery effect on likelihood of purchasing

  McDonald's", which is an interval scale

- In order to test this hypothesis we performed a one sample T-Test.

Hypothesis 2:

There is no relationship between a student's year of study and the amount they are willing to pay.

- This hypothesis has two variables:
  - Factor: Students year of study, nominal, factor
  - Dependent: Amount student is willing to pay for McDelivery, interval
- In order to test this hypothesis we performed a one way ANOVA

Hypothesis 3:

There is no relationship between three variables of delivery attributes (Delivery Time, Delivery

Charge, Customer Service) how much people are willing to pay.

- This hypothesis contains four variables:

  - Independent: Delivery Time, Delivery Charge, Customer Service(Delivery

    Attributes)

  - Dependent: How much students are willing to pay for McDelivery

- In order to test how a student's willingness to pay is affected by these three McDelivery

  attributes, we used a Regression Analysis.

5. Key Findings

Findings from Hypothesis 1:

The first test we ran was a one sample t-test, to determine the effect McDelivery had on Temple Students likelihood to purchase McDonald's

The follow table was generated by Qualtrics

18. How much will McDelivery affect the likelihood of you ordering McDonald's?

#	Answer	Min Value	Max Value	Average Value	Standard Deviation	Responses
1	% of Likelihood	0.00	100.00	40.83	37.24	46

Running a One Sample T-Test in SPSS generated these tables:

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
How much will McDelivery effect the likelihood of you ordering McDonald's-% of Likelihood	46	40.8261	37.23756	5.49038

One-Sample Test

|	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
How much will McDelivery effect the likelihood of you ordering McDonald's-% of Likelihood	7.436	45	.000	40.82609	29.7679	51.8843

One Sample T-Test Analysis

      This one sample T-Test evaluated question 18 of our survey " How much will McDelivery will affect the likelihood of you ordering McDonald's?". SPSS evaluated the 46 responses the question received in order to run the One Sample T-Test. According to the One Sample T-test, we can reject the null hypothesis because the McDelivery system will have a significant effect on student likelihood to purchase McDonald's. The exact significant number stated above is .00, which automatically proves that the hypothesis can be rejected. The 95 percent confidence interval also shows us that more than 50% of the students could be affected by the McDelivery change.

Findings from Hypothesis 2:

The second test ran was to see if there was a relationship between a student's year of study the effect McDelivery has on their likelihood that to purchase McDonald's

The following pie chart was generated through Qualtrics, and depicts our respondents year of study.
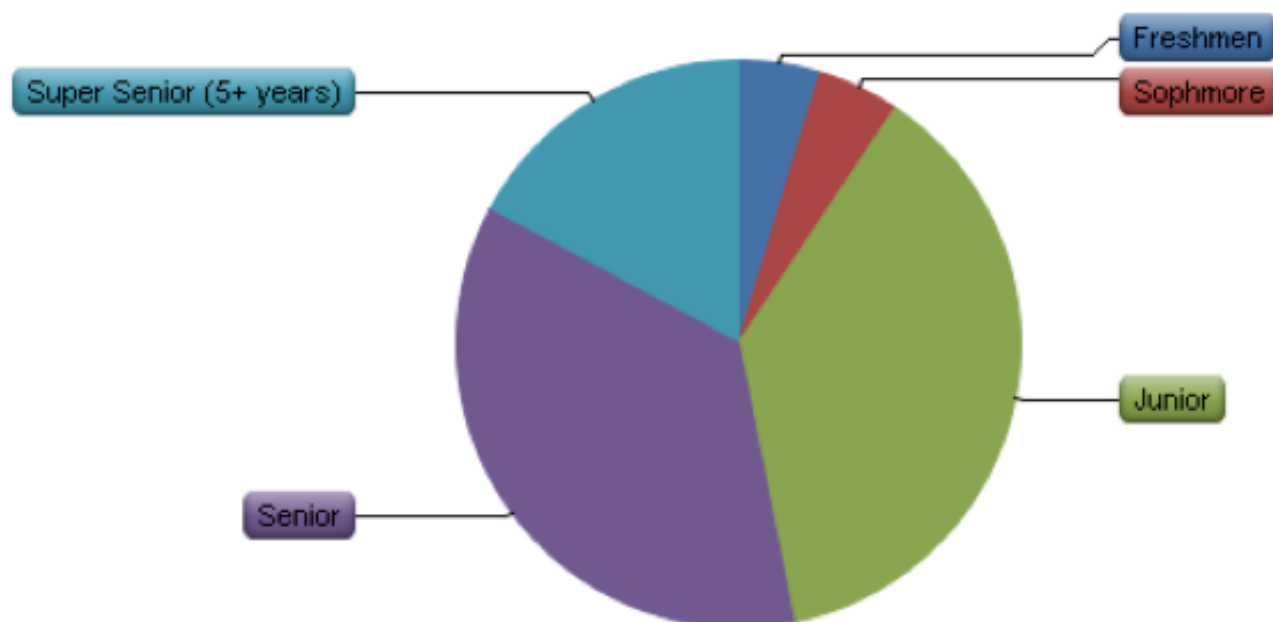
The following tables were generated by running a One-Way ANOVA on SPSS.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: How much are you willing to pay for the delivery charge for McDelivery?-Delivery Charge

Scheffe

(I) What year are you in at Temple University?	(J) What year are you in at Temple University?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Freshmen	Sophmore	-1.66667	1.25877	.780	-5.7357	2.4023
	Junior	.56250	.96995	.987	-2.5729	3.6979
	Senior	.35714	.98083	.998	-2.8134	3.5277
	Super Senior (5+ years)	-.12500	1.04372	1.000	-3.4988	3.2488
Sophmore	Freshmen	1.66667	1.25877	.780	-2.4023	5.7357
	Junior	2.22917	.96995	.279	-.9062	5.3645
	Senior	2.02381	.98083	.387	-1.1467	5.1944
	Super Senior (5+ years)	1.54167	1.04372	.703	-1.8322	4.9155
Junior	Freshmen	-.56250	.96995	.987	-3.6979	2.5729
	Sophmore	-2.22917	.96995	.279	-5.3645	.9062
	Senior	-.20536	.56419	.998	-2.0291	1.6184
	Super Senior (5+ years)	-.68750	.66756	.899	-2.8454	1.4704
Senior	Freshmen	-.35714	.98083	.998	-3.5277	2.8134
	Sophmore	-2.02381	.98083	.387	-5.1944	1.1467
	Junior	.20536	.56419	.998	-1.6184	2.0291
	Super Senior (5+ years)	-.48214	.68327	.973	-2.6908	1.7266
Super Senior (5+ years)	Freshmen	.12500	1.04372	1.000	-3.2488	3.4988
	Sophmore	-1.54167	1.04372	.703	-4.9155	1.8322
	Junior	.68750	.66756	.899	-1.4704	2.8454
	Senior	.48214	.68327	.973	-1.7266	2.6908

Homogeneous Subsets

How much are you willing to pay for the delivery charge for McDelivery?-Delivery Charge

Scheffe[a,b]

What year are you in at Temple University?	N	Subset for alpha = 0.05 1
Junior	16	1.4375
Senior	14	1.6429
Freshmen	3	2.0000
Super Senior (5+ years)	8	2.1250
Sophmore	3	3.6667
Sig.		.248

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.402.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

One-Way ANOVA Analysis

The One way ANOVA evaluated questions 1 " What year are you in at Temple University"and 18 "How much are you willing to pay for the delivery charge for McDelivery?" in order test our hypothesis. SPSS evaluated the 44 responses question 1 received and their

respective answers to question 18 in order to produce the tables above.According to the One way Anova test, we can accept the null hypothesis because the year of study has no effect on the amount the students are willing to pay for delivery. The significance level of .234 is proof of that.

Findings from Hypothesis 3:

The test we ran tested the relationship between how much a respondent is willing to pay for McDelivery and three delivery attributes (delivery time, delivery charge, customer service).

The graph below was generated by qualtrics, and shows the mean value given to these three attributes by the respondents.
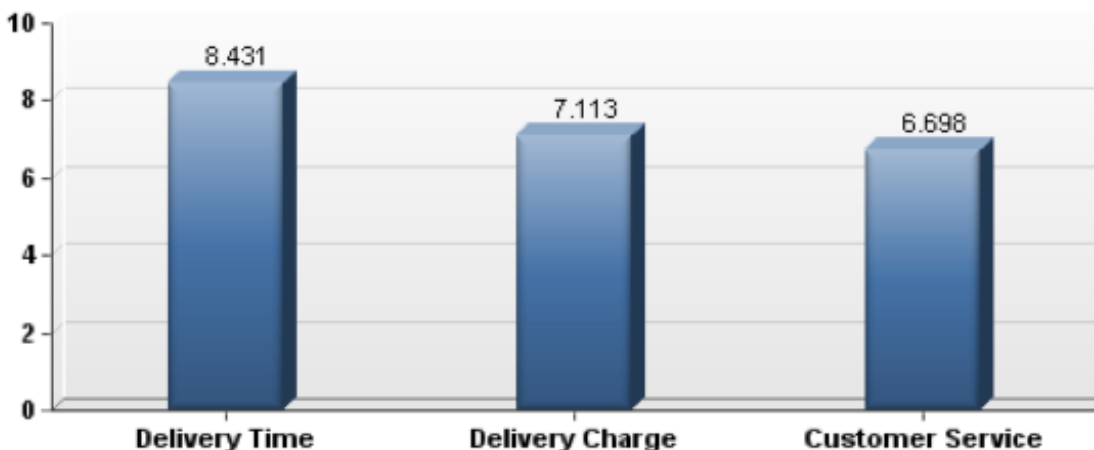
The following tables were generated by running a Regression Analysis in SPSS.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.296[a]	.088	.019	1.55886

a. Predictors: (Constant), Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Delivery Charge, Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Delivery Time, Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Customer Service

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.344	3	3.115	1.282	.294[b]
	Residual	97.202	40	2.430		
	Total	106.545	43			

a. Dependent Variable: How much are you willing to pay for the delivery charge for McDelivery?-Delivery Charge

b. Predictors: (Constant), Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Delivery Charge, Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Delivery Time, Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Customer Service

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.844	.340		5.426	.000
	Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Delivery Time	.050	.035	.282	1.424	.162
	Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Customer Service	-.034	.028	-.272	-1.225	.228
	Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Delivery Charge	-.025	.035	-.148	-.733	.468

a. Dependent Variable: How much are you willing to pay for the delivery charge for McDelivery?-Delivery Charge

Correlations

		Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Delivery Time	Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Delivery Charge	Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Customer Service
Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Delivery Time	Pearson Correlation	1	.270	.451**
	Sig. (2-tailed)		.055	.001
	N	51	51	51
Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Delivery Charge	Pearson Correlation	.270	1	.593**
	Sig. (2-tailed)	.055		.000
	N	51	53	53
Which of the following attributes do you consider when ordering delivery? (Total must sum 100, for...-Customer Service	Pearson Correlation	.451**	.593**	1
	Sig. (2-tailed)	.001	.000	
	N	51	53	53

**. Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis

In order to run the regression analysis SPSS used the data from the 51 responses to question 7 "Which of the following attributes do you consider when ordering delivery?" and question 17 "How much are you willing to pay for the delivery charge for McDelivery?". According to the Regression, we can accept the null hypothesis. All three variables (delivery time, customer service, delivery charge) have a significance above .05, meaning that there is no connection between these three variables and the willingness to pay for the McDelivery system.

6. Conclusions and Limitations

Conclusion:

After gathering and analyzing data we concluded that McDelivery significantly affects the likelihood that Temple University students would purchase McDonald's. From our data analysis, we can conclude that there is no relationship between the student's year of study and the likelihood of them using McDelivery. We conclude that there is a market for McDelivery at Temple University.

Based on these finds we recommend:

- McDonald's next steps in implementing the McDelivery system at Temple University.
  - Focus Groups (Expand)
  - Pilot Program
- When marketing this new service, we suggest that McDonald's target both residence halls and off-campus housing complexes and apartments.
- Many students included unhealthy food in their opinion of McDonald's but were still patronizing the restaurant and were also willing to utilize the McDelivery option. If McDonald's implemented more healthy menu options we believe they would increase their sales in both delivery and on-site.

Limitations:

The limitations to our research include:

- Data Collection
  - Online Surveys met our need and provided an adequate sample. If we were able to specifically target McDonald's customers who were Temple students by doing a convenience sample at the McDonald's on Campus, it could have provided more

beneficial feedback. Doing a convenience sample it would have provided us with a sample of Temple's students who are current McDonald's patrons and would be likely to use McDelivery.

○ According to the answers we got from our opened ended questions, 16 of our respondents have not eaten at McDonald's in the last one month. All but one respondent stated that either they dislike McDonald's, its too unhealthy, or both.

○ Lack of prior research was a limit for our study. It would have been beneficial if we could refer to a previous similar study.

● Sample Size

○ Through TUmail and blackboard we were only able to obtain 51 completed surveys, which is an extremely small sample size for population of 28,000. Increasing our response rate would provide a more accurate picture of how Temple University students would accept a McDelivery system.

○ Only students who have to Facebook, Blackboard, and TUmail were able to have access to the survey. If we could have found additional ways to reach more students the sample size could have increased greatly.

7. Appendix

Table 1: Nearby McDonald's Locations

McDonald's	McDonald's	McDonald's
2109 N Broad St, Philadelphia, PA 0.3 miles N (215) 765-2520	22 W Girard Ave, Philadelphia, PA 1.4 miles SE (215) 425-1200	914 S Broad St, Philadelphia, PA 3.0 miles S (215) 545-7440
McDonald's	McDonald's	McDonald's
3137 N Broad St, Philadelphia, PA 1.4 miles N (215) 228-8336	3935 Walnut St, Philadelphia, PA 3.1 miles SO (215) 222-6266	1706 Walnut St, Philadelphia, PA 2,3 miles S (215) 545-9574
McDonald's	McDonald's	McDonald's
200 W Lehigh Ave, Philadelphia, PA 1,2 miles NE (215) 423-1144	5601 Vine St, Philadelphia, PA 4.0 miles SO (215) 476-4772	2101 W Lehigh Ave, Philadelphia, PA1,1 miles NO (215) 225-6489
McDonald's		
1401 Arch St, Philadelphia, PA 1.9 miles S (215) 564-1960		

https://maps.google.com/maps?q=mcdonald's+locations+on+the+temple+campus&ie=UTF-8&ei=oxelUoDBMsS1sATP1oDQAQ&ved=0CAoQ_AUoAg