

Survey Project and Presentation (260 Points)	Joy Sebesta
MATH130 Intro to Statistics	Spring 2020
INTRODUCTION	
Summary For this project you will collect information about a topic you are interested in via the use of a survey. Before you write your survey you should come up with a hypothesis that describes what you think will happen. After you choose your topic you will need to create a survey that has as little bias as possible. Once you have collected your data you will need to organize and analyze the information using techniques we will discuss in the upcoming weeks. The final step in the process will be an in depth discussion of your results and your interpretation of the data.	
TASKS	
1. Choose a Topic (<i>Topic and Hypothesis - Due 2/7</i>) ~ <i>submitted in iLearn</i> Choose a topic that interests you, but be sure that it will interest other students as well. When you choose a topic be sure to consider the population that you topic involves. The more focused you can make your population the easier it will be to conduct your survey. Write your hypothesis. This will be what you think the outcome will be. 2. Write a Survey to collect data. (<i>Survey Rough Draft - Due 2/20 – Post to Forum in iLearn for peer editing</i>) Your survey should contain at least 8 questions. These questions should help you get information regarding your topic. Be sure your questions are as unbiased as possible. 3. Plan How will you distribute your survey? Which of the different sampling methods will give you the best results? Keep in mind that you can accomplish this online using Google Forms & Survey Monkey. 4. Collect Data & Analyze (<i>Data collection should be completed by 4/30</i>) Once your survey has been administered and you have collected your data use the measures of central tendency to put numerical values on responses. This will allow your reader to understand you study. Using methods that we have discussed in class use the appropriate calculations to test your hypothesis. 5. Organize Using descriptive statistics, organize the data. Please create three different types of graphs or charts to illustrate your results (pie chart, histogram, dot plot, box and whisker plot). Make sure you analyze all of your questions and find the measures of central tendency (mean, median and mode of numerical data). 6. Write (<i>Final Copy due 5/8~submitted in iLearn</i>) Your paper should walk your reader through the whole process of development of your survey, why you chose to represent your data the way you did, and which tools from descriptive statistics you used to complete the project. Please also include all calculations and explain why you chose to use that method. Clearly state all conclusions. Don't forget to answer the reflection questions on page 3.	

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REQUIREMENTS		
Project Requirements 1. Survey Topic Submission In order to start your project you must have your topic approved by your professor. Please write up a proposal that completely answers the questions in the on page 3 and submit it to your professor on/before the due date. 2. Master Survey The project survey must include 8 to 10 questions on the pre-approved project topic. Be sure to avoid bias as much as possible. We will peer review your questions in a forum on iLearn. 3. Completed Surveys Be sure to keep the collected surveys. Make sure you collect enough data to ensure you can make inferences regarding your entire population. (For example, if your population was the entire student body at Marist and there were 1500 students you would need 150 surveys or 10% of the population.) 4. Paper (120 Points) The paper should adequately answer all of the proposed questions above and include as much relevant information as you can provide to give your reader a full understanding of your question creation, data collection and data analysis process. Did you prove or disprove your original hypothesis? 5. Graphs, Charts & Numbers Include all charts, graphs and calculations that you used to analyze your data 6. Presentation (5-7 slides) (100 points) Create a PowerPoint or Prezi slideshow of your research. This should include everything from your hypothesis to your results. You don't need as much detail as in your paper but you should include the charts, tables, and graphs that you used to analyze your work. Alternatively, you can also create a tri-fold display board to display your results and explain them to the class. 7. Reflection Questions (100 Points) You must complete a reflection to complete your project. The reflection should include detailed explanations that will help your reader understand what you did to complete the project.		
WRITE UP		
Your paper should include an in-depth discussions about but not limited to the following: ▪ How and why you chose your topic and clearly state your hypothesis. ▪ Detailed descriptions of the population of your study. ▪ How and why you selected the people who took your survey. Was there any bias? ▪ Was there any error or bias you found in your questions? ▪ What tools from descriptive statistics did you use to analyze the data? ▪ How did you compute the information? ▪ What forms of representation (graphs, charts) did you choose to display you data and why? ▪ An explanation of what the different representations of the data mean. ▪ What did you find out from the survey? ▪ What inferences can you come up with, if any, about your topic?		

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SURVEY TOPIC SUBMISSION QUESTIONS	
Write a paragraph that thoroughly answers each of the following questions. • What is the topic of your survey? • Why did you choose this topic? • What are your goals in exploring this topic? What results do you expect to see? (Hypothesis) • Who or what is the population that you plan to survey? • Which type of sampling do you plan to use to conduct your survey? Why did you choose this method? • Is there any other information that you will need in order for your survey to be successful? • Be sure that your survey will have quantitative measures so that you can put your results in the different graphs that we have talked about in class. (box plots, histograms etc.) If your answers are not numerical, what will you have to do in order to get usable information from them?	
REFLECTION QUESTIONS	
• Did you meet the goal you explained in your survey topic submission? If yes, how did you meet the goal? If not, why do you think you didn't meet the goal you expected? • What challenges did you face in completing the project? How did you overcome those challenges? • What did you learn from completing this project about your chosen topic? • Was there anything that surprised you in your survey results? Could you have predicted that before the start of your project? • If you had to do the survey over again, how would you change it to get better results? • • Is there anything else you would like to tell your instructor about how the project went?	

Bibliography:

Pooler 2012 Descriptive Statistics Survey Project

<https://www.teacherspayteachers.com/Product/CCSS-Aligned-Descriptive-Statistics-Survey-Project-443313>

Grading Rubric

Descriptive Statistics Project Rubric				
	Survey	Paper Content	Paper Mechanics	Descriptive Statistics
Exemplary 4	The survey contains 8 – 10 well organized and thoughtful questions. Questions have been constructed in a way to allow for informational numerical analysis of the topic. The questions contain little to no bias.	The essay contains all required information in depth. The information contains no errors and the student's analysis of descriptions of the study goes above and beyond the requirements and understanding of descriptive statistics and analysis.	The essay contains proper English grammar techniques. The essay contains only a few grammar or spelling errors. It is obvious that the student has proof read the paper.	The project contains at least 3 – 4 different descriptive statistical representations with no errors. All descriptive statistics are calculated accurately. Step – by – step work is provided.
Average 3	The survey contains 8 – 10 well organized and thoughtful questions. Questions have been constructed in a way to allow for informational numerical analysis of the topic. The questions may contain some bias.	The essay contains all required information in depth. The information may contain few errors and the student's analysis of the study shows average effort and understanding of descriptive statistics and analysis.	The essay contains proper English grammar techniques. The essay contains only no more than 6 grammar or spelling errors.	The project contains at least 3 – 4 different descriptive statistical representations with few errors. Descriptive statistics are calculated with little to no errors. Most step – by – step work is provided.
Below Average 2	The survey contains 8 – 10 questions. Questions construction may have some flaws that lead to bias in the answers of survey participants.	The essay contains most of the required information in depth. The information may contain errors and the student's analysis of the study shows some understanding of descriptive statistics and analysis.	The essay contains grammatical flaws that make it hard to understand the content. There are several grammatical and spelling errors. It is evident the paper was not proof read.	The project contains at least 2 different descriptive statistical representations with some errors. Descriptive statistics are calculated with some errors. Little to no step – by – step work is provided.
Poor 1	The survey may not meet the required 8 – 10 questions. The presented questions contain flaws that lead to bias from the survey giver or taker.	The essay contains some required information in depth. The information may contain errors and the student's analysis of the study shows little understanding of descriptive statistics and analysis.	The essay contains multiple spelling and grammar errors that make it hard to understand the papers content. The paper was not proof read.	The project may contain no descriptive statistical representations with several errors. Descriptive statistics are calculated with several errors. No work may be provided.
Weighting	x	x	x	X
Total Points				

Each of the 4 categories is worth 40 points.