To: Dr. Reese

From: Jason Smith JSS

Subject: TSM 251 Graphing/Charting Assignment

The Following is an assignment given to me in TSM 251. The purpose of this assignment is to assess my ability to create accurate, functional, and aesthetically pleasing charts and graphs in order to present information. To complete this assignment, I used the internet and the Choices III program to do my research, and I used Microsoft Excel 2003 to compile the information, and turn the information into charts and graphs. These graphs were then transferred into Microsoft Word so they could be placed in proper memo formatting. This Word document was then converted to PDF format.

Responses Submitted for Grading

1.) The first question is in regard to the exchange rate between the United States Dollar and the Australian and New Zealand Dollar. According to my research, the value of the US Dollar in relation to that of its Australian and New Zealand counterparts is decreasing at a fairly steady rate (Figure 1). This, in turn, will most likely lead to less tourism by Americans to these areas, as the American Dollar can buy increasingly less in these areas. I chose to illustrate this using a line graph, because this best illustrates changing values over time.

![Figure 1: Currency Exchange Rate From US Dollar](http://www.oanda.com/convert/fxhistory)

Source: http://www.oanda.com/convert/fxhistory
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2.) This question relates to data acquired in a previous TSM 251 assignment. For this, we were to use multiple search engines to find websites relating to non-point source pollution. This was done by first typing in the term *non-point source pollution*. This was repeated using the same websites, only this time quotations were added around the words *non-point source pollution*. The results may be viewed below (Figure 2). It is important to note that the purpose of that particular assignment was on to find as many hits as possible, but rather to limit the search to only relevant hits. Thus, the smaller bars represent more efficient searches. I illustrated this using a bar graph because it was the easiest way to read all of the information given at one time.

![Figure 2: Number of Search Results for "Nonpoint Source Pollution"](image)

Sources: Google, Yahoo, and Ask.com
3.) This question asks about the demographics of our TSM 251 class. As seen below (Figure 3), I used a pie chart to illustrate the differences between the number of males and females in our class. This was because I felt it important to not only illustrate the number of students each population has, but also their percentages in relation to the total population. The professor is not included in this data. Although the color scheme might look a bit odd, this was done so that the graph can still be easily interpreted if printed in black and white.

![Figure 3: Male and Female Populations in TSM 251](http://angel.msu.edu)
4.) The following is a graph of data I collected earlier in the year regarding my mentoring topic. The data referred to the number of people in Agriculture in the United States according to age (Figure 4). As the data suggests, there are a large number of people at or near the age of retirement in these industries, and not a lot of people in the younger age brackets to take over for those who will soon be retiring. This suggests that there will most likely be a high demand for young minds interested in Agriculture related fields.

![Figure 4: Number of People in the US working in Fisheries, Forestry, and Agriculture](image)

Source: Choices III Computer Program: MSU Library
5.) This final graph attempts to support the hypothesis created in the last segment, that there is an increasing demand in agricultural fields. To prove this, I collected data relating to the average wages of farm workers within the United States. I displayed this information on a line graph to illustrate the general change over time. (Figure 5). This data shows that over time, wages have steadily increased for farm workers.

![Figure 5: Wage Rates for Farm Workers By Year](http://www.nass.usda.gov/Charts_and_Maps/graphics/data/fl_qtrwg.txt)