

Sustainability Exercise
in Georjeanna Wilson-Doenges'
COMM SCI 205 Social Science Statistics
9/5/2014

The Exercise:

On the second day of class when I would be teaching about frequency distributions, I prepared an in-class “dumpster dive” into one recycle bin. I asked our MAC Hall custodian, Leon, to bring in the recycle and trash bins into MAC 103 (our classroom). I then picked through the recycle bin in front of the class and had the students tally up the number of correctly and incorrectly recycled items in the recycle bin. I put the incorrectly recycled material into the trash bin and put the correctly recycled material back in the recycle bin and returned the bins to the hall after the exercise was done.

I talked to the students about Leon’s job as a custodian and how he feels personally responsible for proper recycling and tries to sort through the trash as much as his job allows. I talked about UWGB’s valuing sustainability.

We then made a frequency table of the results as part of the content of the stats class for the day. This is what we found:

X = Correct/incorrectly recycled	f	relative proportion	relative %
Correct	49	$\frac{49}{93} = .527$	52.7
Incorrect	44	$\frac{44}{93} = .473$	47.3
	n = 93	= 1.0	100%

There was almost a 50/50 split between correctly and incorrectly recycled material in the bin of 93 separate items. Some of the most common incorrectly recycled materials were plastic cups, straws, and plastic food containers.

At the end of class that day, I asked students to complete a short survey answering these 4 questions:

1. Were you surprised by the amount of incorrectly disposed of items in the trash and recycling?

Not at all **A little bit** **Somewhat** **Absolutely**

2. Did this little stats exercise change the way you feel about recycling?

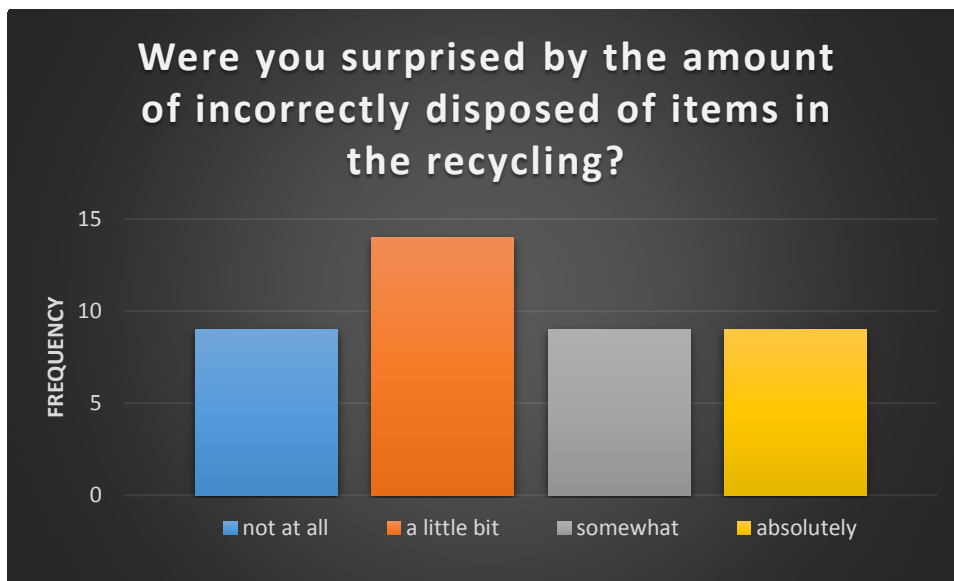
Not at all **A little bit** **Somewhat** **Absolutely**

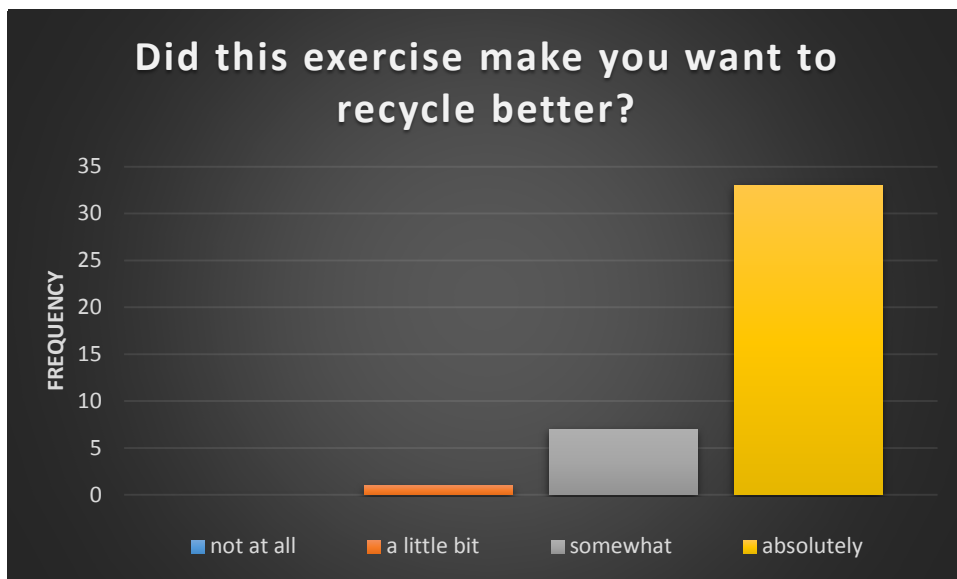
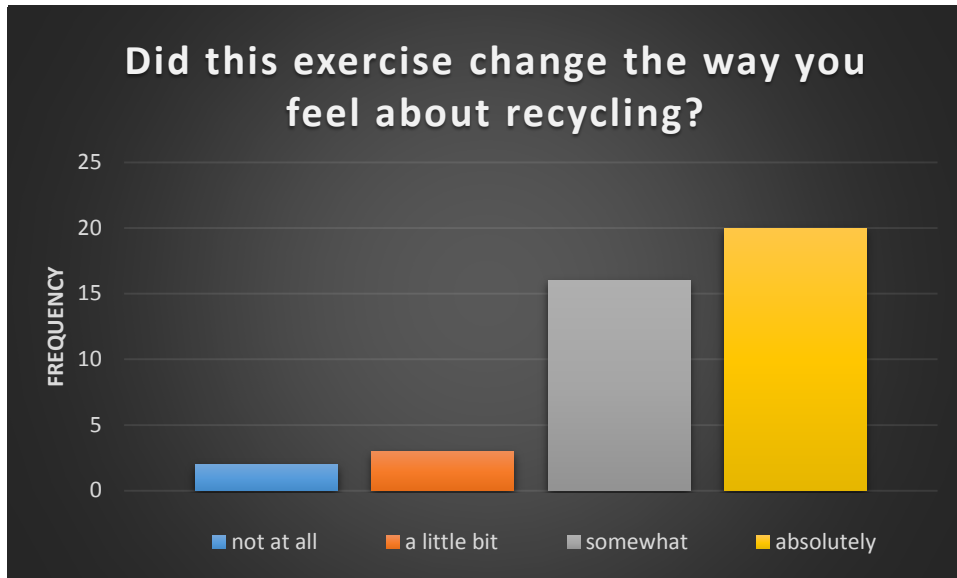
3. Did this little stats exercise make you want to recycle better?

Not at all **A little bit** **Somewhat** **Absolutely**

4. Any comments you would like to make about this exercise?

The results were surprising even to me!! Particularly surprising was the result that 80% of the 41 students in my class responded that the exercise absolutely made them want to recycle better! Here are the results of the survey and the written comments:





Written comments:

- Interesting and eye opening
- Was a good way to teach the class about better recycling and stats simultaneously
- Helped relate math to life
- Fun
- I spend time at work and home doing what Leon does – properly recycling other people’s stuff
- Thank him!!

- Great way of bringing awareness
- Didn't know caps had to be taken off
- It really opened my eyes
- It was a good learning experience to actually see for ourselves.
- Good eye opener
- I really enjoyed the fact that you engaged the class by actually doing the problem
- I enjoy a good exercise to help others be more aware of what they do and how it will affect the future generation
- I always assumed people knew to take caps off bottles.
- It really helped me better understand how stats works.
- It was cool to be part of collecting the data and not just given it.
- Very interesting demonstration!
- I applaud you for wanting to dig through the recycling/garbage!
- I had no idea about the bottle caps!
- If you are trying to make it a "recycle more" lesson, maybe show data of bigger detail then – maybe a world stat table.
- I was actually surprised by how much was correctly recycled! I thought there would be less.

Final Thoughts:

This was a simple, short exercise that was relevant to the material in the statistics class and also brought to life thoughts about recycling and sustainability. The survey showed that students may actually change their recycling behavior as a result of this simple exercise.