AP Statistics Text Messaging Competition

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I use this activity at the start of the school year in order to assess many of the skills students learn in the “descriptive statistics” unit of our course. It is also among the most fun and popular activities we run all year.

Naturally, there is nothing stopping one from running the competition later in the year and running tests on differences in means on the outcomes, or as a review activity on descriptive and graphical displays of data.

PREWORK: The day before the activity is scheduled I collect information from my students, which I type into an excel spreadsheet (sample available on Stats Monkey or by writing me). I collect the following variables:

* Name:
* Cell phone carrier: (AT&T, Verizon, T-Mobile, Sprint, Other)
* Type of keypad: (Numeric, QUERTY, iPhone)
* Optional info: Messaging plan (limited, unlimited), messaging experience (frequent, often, occasional, rarely).

MATERIALS: Besides the spreadsheet, you’ll need the “challenge sentences” printed on sheets of paper. You may do this on a powerpoint slide, but I prefer to hand each student a half-sheet of paper with the sentence printed, then on the call of “go” have the sheets turned over and the texting begin. You’ll need comparable sentences, as half the class will text first, then the other half of the class. The sentences I have used I draw from wikipedia’s list of panagrams, sentences that use every letter of the alphabet at least once. I select 2 comparable panagrams, such as:

 Jack quietly moved up front and seized the big ball of wax. (47 letters)

 Few black taxis drive up major roads on quiet hazy nights. (47 letters)

You’ll need to photocopy the sentence on individual (half) pieces of paper. One for each kid.

DAY OF THE ACTIVITY: Naturally, the class will be told to bring their phones on this day. The class should pair up. It may be necessary to make one group of three. It may also be necessary to strategically “massage” the pairings a bit, since phone numbers will be exchanged, and it can be awkward to be forced to pair the “shy girl” with the “unpopular boy.” Students should exchange phone numbers and place the opposite person in their “contacts.” Phones should be placed in what I refer to as the “home position,” as if the phone was just turned-on, with nothing “prepped.” More on this later.

\*\*\* STUDENT WITHOUT PHONES OR MESSENGING PLANS\*\*\* There are lots of chores I give these students. They include: data collection, official timer, and distribution of the challenge sentence.

THE ACTIVITY:

1. Separate the students into two halves of the room by breaking up the pairs. One side is the senders, one is the receivers (these will switch for round 2).
2. Explain the competition. Make clear to the class that errors or spelling, punctuation, or capitalization will be assessed a FIVE SECOND PENALTY for EACH mistake.
3. Make sure all phones are “on” with ringers “on” (it’s much more fun!) and laid on the desks.
4. Have one of the sentences handed out to everyone FACE DOWN. No peaking allowed.
5. A student should be assigned as a “timer” (or you can do it, or you can project a stopwatch timer).
6. On the call of GO, sheets are turned over and the SENDERS should open up their text messaging programs, insert the RECEIVER’S name, and begin texting the sentence as fast as possible.
7. RECEIVERS should record the time (in seconds, being read aloud) as soon as their phone indicates a message has been received. IMPORTANT: the time should be written down as soon as the message is received, NOT after the message is checked.
8. Once all texts are received, final results (including error penalties) are collected. Then, RECEIVERS become SENDERS and SENDERS become RECEIVERS, and using the 2nd sentence, you run the competition all over again.
9. All final times should be collected on the spreadsheet, which will be distributed (made available) along with the assignment the next day.

THE POST-ACTIVITY ASSIGNMENT:

Distribute (make available) the spreadsheet of data with this assignment. There are lots of questions you can ask. I usually ask students the following:

1. Create a graphical display of the data that tells us a story. I give them some free reign, but you can ask them to create a bar chart, stemplot, whisker-plot, or virtually any graph of texting times against another variable.
2. What OTHER variables should we consider when considering who “won” this competition? Students will be VERY opinionated on the subject of lurking variables here (even if you have not yet introduced that term).
3. Any number of descriptive statistics also may be collected at this time.

POST-ACTIVITY FUN:

I have had two or three sections of AP Statistics over the past couple of years. I take the top four times in each class, as well as the top times from the top four returning students from last year (the students who took the class as a Junior), come back and we hold a “**tournament of champions**” where all the students text a single sentence to me. Since my phone will record them in the order received, it is very easy to determine the winner. This tournament gets a lot of talk around the school throughout the entire year.

QUESTIONS? Comments? Please feel free to write: ashrager@hvrsd.org. ENJOY AND GOOD LUCK! Adam