

Survey of Excel Usage in General Chemistry

CHM 102

Spring 2007

n = 29 students

Please answer the following questions honestly when considering the various interactive Excel spreadsheets or Excelets that you have used as part of this class. Select your answers by (1) clicking on the boxes if responding on a computer and then print (or save and attach to an email - ssinex@pgcc.edu) or (2) print and mark an x with a pen if on paper.

Which do you prefer: static graphs in a textbook dynamic graphs in Excel
Both 3% (1) 21% (6) 76% (22)

Using Excelets does not require that you be familiar with Excel.

most definitely I think so just barely not at all don't know
7% (2) 38% (11) 34% (10) 14% (4) 7% (2)

Excelets offer a more visual experience with graphs instead of using just the mathematical equations.

most definitely I think so just barely not at all don't know
66% (19) 24% (7) 10% (3)

Excelets make it easier to grasp or learn a concept.

most definitely I think so just barely not at all don't know
55% (16) 31% (9) 14% (4)

On an Excelet, do you prefer just a single curve or line that moves or do you like the comparison graphs where two or more curves or lines are shown (one curve/line moves when changing a variable and the other remains at a constant reference condition)?

one curve/line only two curves/lines many curves/lines don't know
17% (5) 55% (16) 14% (4) 10% (3)

Having the check boxes or option buttons on an Excelet to turn curves/lines on and off (plotted or not plotted) on a graph is helpful.

most definitely I think so rarely not at all don't know
52% (15) 38% (11) 10% (3)

The instructions for using any interactive Excel spreadsheet are usually

too few need a little more just right too complicated don't know
14% (4) 45% (13) 41% (12)

The use of comment boxes (cells with the red triangle in the upper right corner) for instructions, answers, and other information is helpful.

most definitely I think so rarely not at all don't know
41% (12) 41% (12) 17% (5)

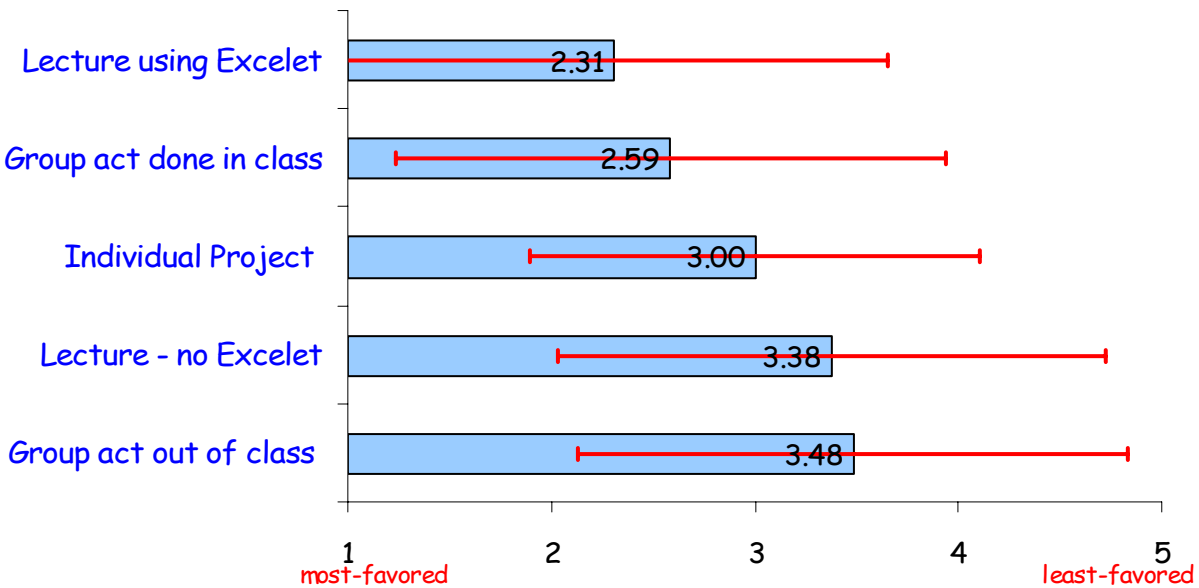
After the instructor uses an Excelet in class that is available on the web, do you go and use it to review and help enhance your understanding?

never once in a while usually always don't know
3% (1) 59% (17) 34% (10) 3% (1)

Rank the following uses of Excelets. Place the number in the box next to the statements given below: 1 - most favored ... 5 - least favored

2.31	Lectures with an Excelet used as part of the discussion
3.38	Lectures with no use of Excelets
3.00	Individual projects that involve an Excelet
2.59	Group activities in class with instructor that involve an Excelet
3.48	Group activities out of class without instructor that involve an Excelet

Mean with plus/minus one standard deviation



I like the interactive nature of Excelets because it lets me I don't like interactive)
 play & experiment discover on my own think all of these don't know
 34% (10) 14% (4) 7% (2) 41% (12) 3% (1)

You can type in the gray shaded areas and they will expand to hold any comments.

Most favorite Excelet: Why?

In general with no favorite:

- All of the excelets were very helpful
- Helps me interact and understand and to grasp info more
- It is visual and helps me to see and understand what can affect and cause a change

Potential Energy Diagram

- detailed and illustrative pages (velocity, rate constants), easy to understand

Beer's Law

- It was the best for me because it was the easiest to relate to and understand

Chlorination of Natural Waters (2)

- Easy to understand and use
- The data could be changed and the graph changes so that it is easy to find the rule

Chemical Kinetics Simulation (2)

- because it has a variety of plots for the different reaction orders

Interactive Periodic Trends

- I like being able to try to figure out the trends although it can be difficult to interpret some

Bond Energy Calculator

- because I was able to play around with it and understand it better than reading the textbook

Buffer Capacity

- very ease to use and understand

Behavior of Weak Acids

- the spreadsheet is not busy with a lot of information in any one sheet, and clearly illustrates key concepts such as percent dissociation

Least favorite Excel:

Why?

Arrhenius (2)

- because everything was bunched up, too much going on, on each spreadsheet

Chemical Kinetics Simulation

- had trouble understanding what each different page is showing (different orders of reaction, which are shown in title on each page)

Chlorination of Natural Waters

- the first graph barely changes so it is hard to tell what is going on (numerical display on worksheet shows changes)

buffer

- it was difficult to understand the graph as the axes were not well defined

Interactive Periodic Trends

- graphs are sometimes too subtle to see on a small screen, lack of contrast

none (4)

- the ones we have used are pretty convenient and helpful
- because I find them all too useful

Any comments/suggestions:

Some Excelets busy

Great learning tool, visual

More group work in class

Work at home

Help we understand

Larger display in class

Busy and teach graph interpretation

Add more questions for student to test themselves

Helpful in understanding concepts

How to use

Never saw comment boxes

More in class

...and thanks for taking time to provide feedback!