

# 3 EASY WAYS TO HELP SUPPORT THE 360° STUDENT

**REMOTE**

the connected faculty summit

June 9-10, 2021 Free Virtual Event

HOSTED BY  
**ASU** Arizona State  
University

Dr. Amanda J. Norbutus

Valencia College

Orlando, FL

# GOAL: BUILD STUDENTS' SOFT SKILLS

- Building and Analyzing Study Habits
- Planning
- Communication
- Perseverance
- Initiative
- Decision-Making
- Self-confidence



## 3 STRATEGIES

1. Ease of Access: Office Hours and Problem-Solving Sessions
2. Study Modules and In-Class Study Tips
3. Student-Self Reflections and Academic Affirmations

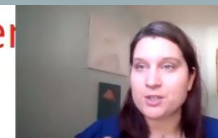
## MAKE OFFICE HOURS COUNT

- Choose office hours that fit your schedule, but also encompasses the likelihood that your students *can actually attend* them
- Offer access outside of normal “business” hours
  - Blend of morning, afternoon, and at least 1 evening office hours a week
- Office hours tend to be well-attended right after class
- Request students attempt a problem before talking about it in office hours

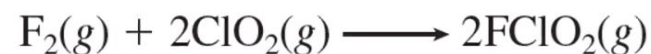
# PROBLEM-SOLVING AND ENTANGLED LEARNING

- Less lecture, more active learning
- Optional 3rd session is co-hosted with a course tutor.
  - Practice medium-to-complex problems to bridge between introductory problems offered in the text and/or PowerPoint and those used to test mastery of subject material in HW, quizzes, and tests.
- Use screen notation, breakout groups, and chat functions to engage students

## Dependence of Reaction Rate on Reactant Concentration



### Initial Determination of the Rate Law



$$\text{rate} = k[\text{F}_2]^x[\text{ClO}_2]^y$$

| Experiment | [F <sub>2</sub> ] (M) | [ClO <sub>2</sub> ] (M) | Initial Rate (M/s)     |
|------------|-----------------------|-------------------------|------------------------|
| 1          | 0.10                  | 0.010                   | 1.2 × 10 <sup>-3</sup> |
| 2          | 0.10                  | 0.040                   | 4.8 × 10 <sup>-3</sup> |
| 3          | 0.20                  | 0.010                   | 2.4 × 10 <sup>-3</sup> |

$$\frac{\text{rate}_2}{\text{rate}_1} = \frac{0.0048 \frac{\text{M}}{\text{s}}}{0.0012 \frac{\text{M}}{\text{s}}} = 4$$

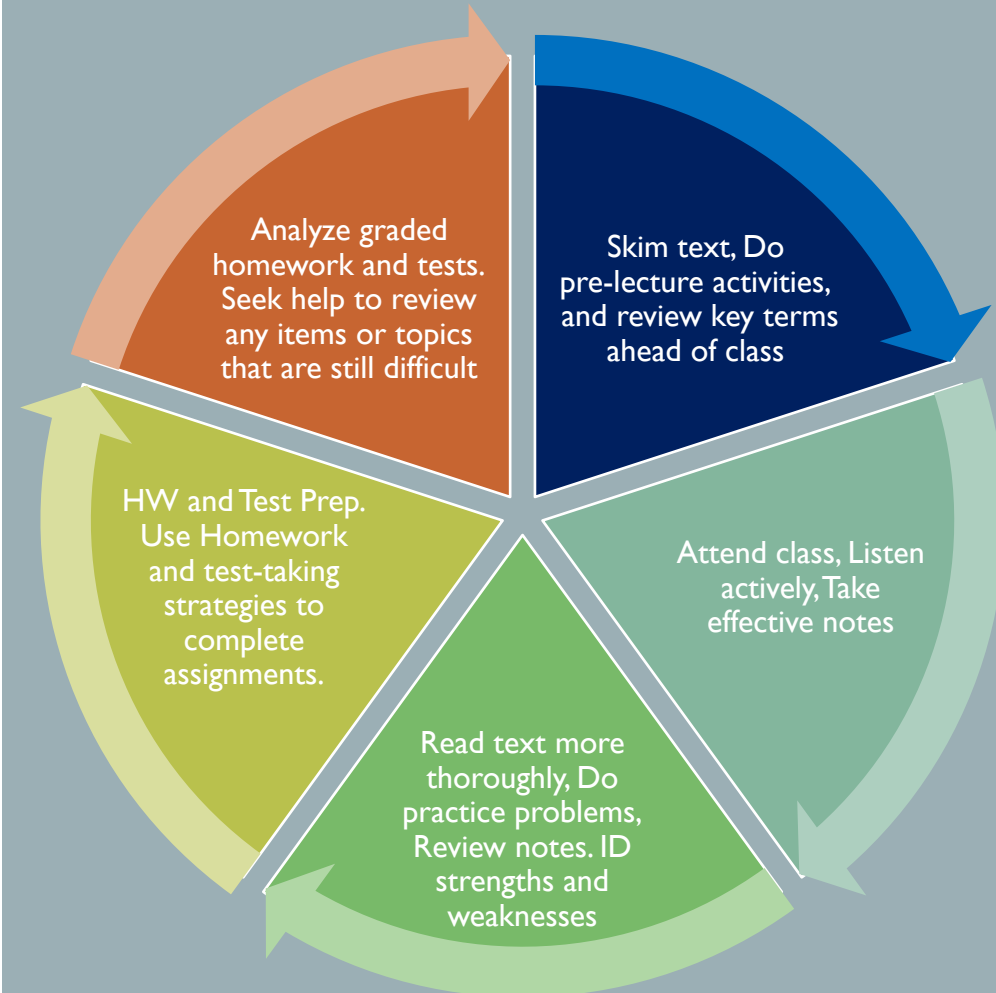
$$\frac{[\text{ClO}_2]_2}{[\text{ClO}_2]_1} = \frac{0.040 \text{ M}}{0.010 \text{ M}} = 4$$

$$\frac{\text{rate}_2}{[\text{ClO}_2]_2} = \frac{4}{4} = 1$$

$$\text{rate} = k[\text{F}_2][\text{ClO}_2]^y$$

# STUDY SKILLS

- Incoming students are exhibiting fewer study skills.
  - Instead of innately knowing how to take notes, how to study, how to practice/read in small chunks of time, students often depend on listening/watching lecture, and many decline to take notes down physically.
- Stronger neural pathways get built when students take handwritten or typed notes
- Students told it is okay to write in shorthand or abbreviations versus writing everything down word-for-word
- Practice, practice, practice



☰ ▾ Study Tips

☰ 🔗 [General Chemistry - What do you need to know/review to do well in Gen Ch](#)

☰ 🔗 [Study Tips for Chemistry](#)

☰ 📎 [Science Study Tips 1.8.2021.pdf](#)

☰ 📎 [CHM 1046 - Helpful Info Norbutus.docx](#)

☰ 🔗 [Study Session Sign Up Document](#)

## Helpful Hints

Establish good study practices right away:

- Complete your problem sets ahead of time—there is one due every **chapter**.
  - Graded problem sets found online as “Macmillan Achieve” homework, so purchase access online immediately.
  - Ask Prof. Norbutus questions about your problems by Friday office hours, which end at 12:30pm.
    - Quizzes will be open most **at least 3 days**, as will Exams. Dates as noted in the syllabus or in our [Google Calendar](#)
- For each class period, you should spend an average of 2–3 hours on outside work (e.g., doing problems, reviewing old problems, reading the textbook, studying for exams). E.g. ~6-9 hours outside work per week.
- Block out uninterrupted chunks of time to work on chemistry each week and reserve a significant part of that time to review material from the previous day’s problems *if you did not get them a 100% correct*.
- Form study groups during the first week of class.
- Make sure you have all required resources including a binder and a scientific calculator.
- Submit any testing forms and accommodations ASAP. Talk to Prof. Norbutus if you have any concerns about these accommodations or policies.
- Expect that every lab will require *pre-lab* review on your part.
- You may only have a calculator and periodic table, along with the given Useful Information equations and constants.
- Use pencils for working on quizzes exams, but take notes and do calculations in pen (easier to read as you review the material).
- Worried about keeping up in class? There are *great* resources on campus to help you out.
  - Talk to Prof. Norbutus *immediately* if you feel lost or behind.
- **Valencia Student Services:** The Valencia College family remains committed to your success. This is why we’ve ensured that all of our student services remain available to you online. During the spring semester, we strongly encourage you to access the following student services: [free, online tutoring](#), the [library](#), the [Virtual Answer Center](#) and the [Virtual Advising Center](#), the [Office for Students with Disabilities](#), the [Career Center](#) and [Student Development](#). (If you are an international student in F or J status, please [contact International Student Services](#) to connect with an advisor.)

see when I am

Valencia Student

## Category 1: Space it out!

*Learning happens over time, not all at once.*

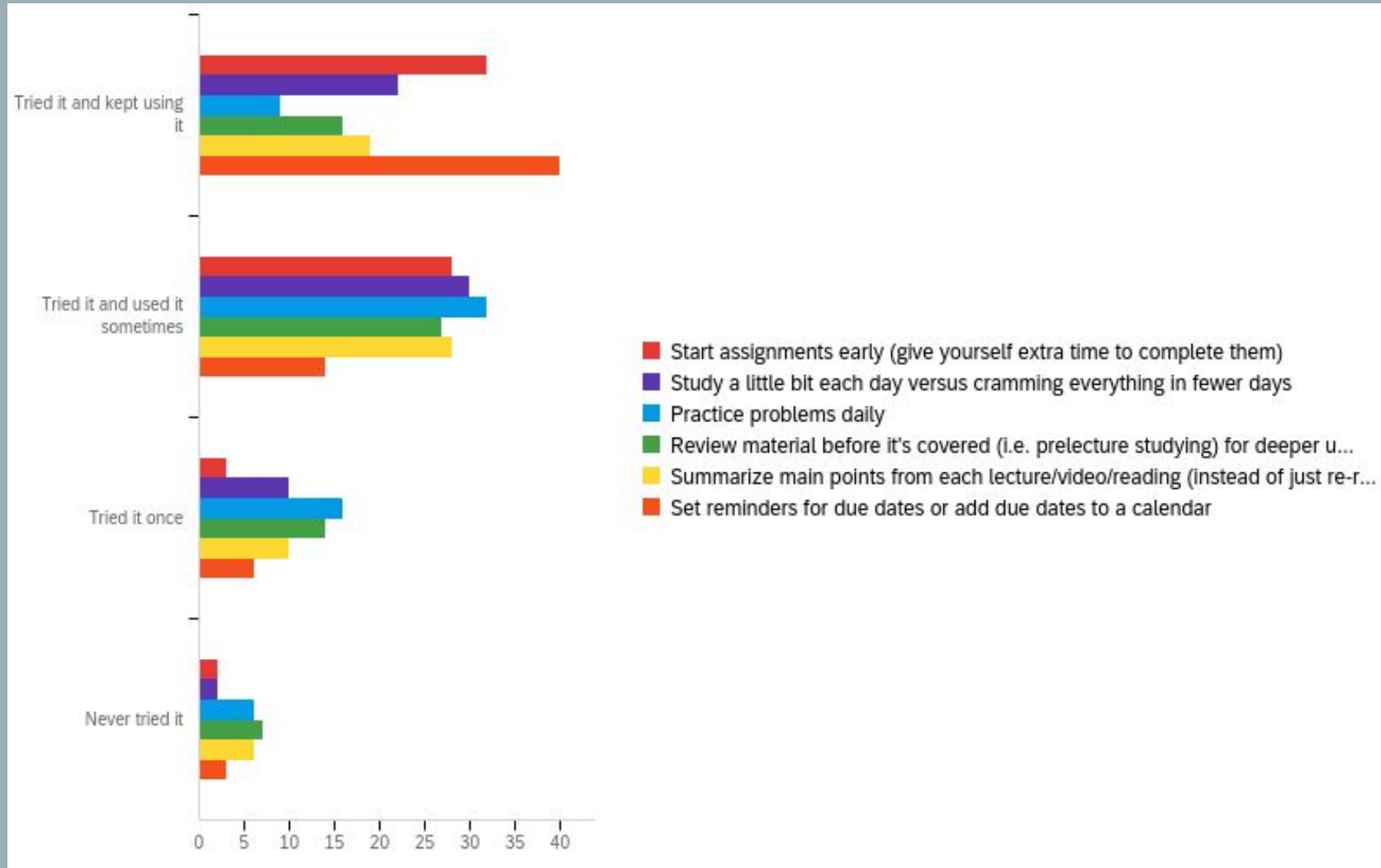
Select at least one strategy that you will use to help you **space out your studying**.

*Choose as many as you like.*

- Start assignments early and give myself more time than I think I need to complete them.
- Put some time on my calendar to study for this class a little bit each day rather than cramming everything in fewer days.
- Practice problems daily.
- Review the material (in the book for example) before it's covered in a lecture or instruction for a deeper understanding.
- Summarize the main points of all of my notes from any lectures, videos, and/or readings (because just re-reading isn't effective.)
- Set reminders or add all upcoming due dates and tests to a calendar.



Q - Which of the following "Space it Out" study strategies did you try during the semester.



# ACADEMIC AFFIRMATIONS

- Academic Affirmations can help students stay their path as they face deadlines, outside time conflicts and stressors, and "semester fatigue"
  - Can stimulate growth mindset



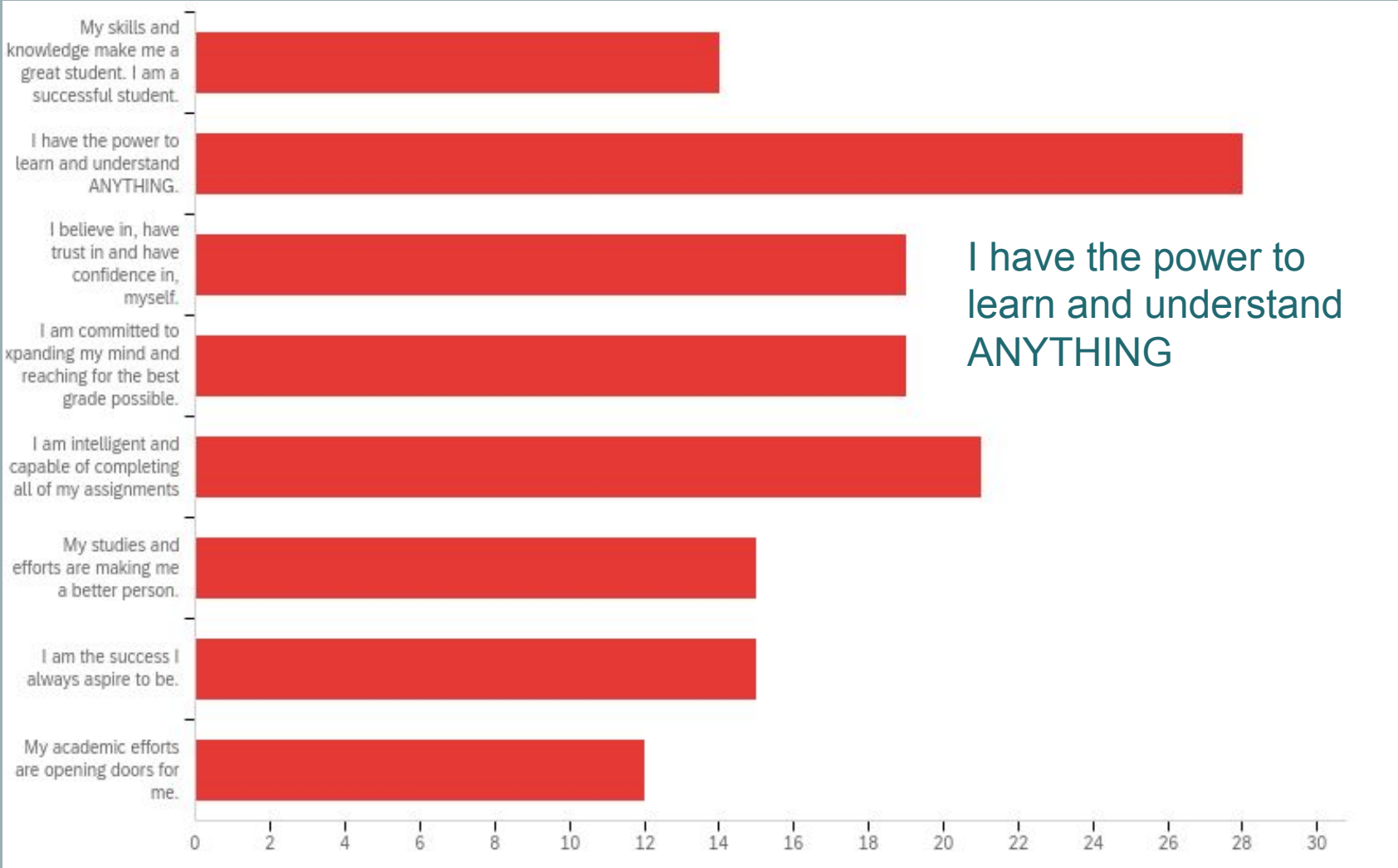
*I am focused and  
I think clearly.*

# ACADEMIC AFFIRMATIONS



- Students were asked **manually** write down academic affirmations
  - Also asked to write why they believed those affirmations would help them stay focused and on track during the semester
- Students told to physically record/write their affirmations instead of typing it in a computer or phone
  - Scientific evidence shows that there is a connection between writing notes and messages by hand and the creation of *easier-to-access and longer-lasting neuropathways* for those handwritten thoughts/memories (Planton et al., *Cortex*, 2013)

# ACADEMIC AFFIRMATIONS STUDENTS USED MOST FREQUENTLY




# TOWARDS FUTURE STUDENT SUCCESS

Let students know their study options early and often

Give them the trust and the tools to self-analyze and reflect

Be open and willing

Give space and time for active-learning/problem-solving

 Student Surveys

What are you hoping to learn in this class? Are there any skills you are hoping to walk away with?

On a scale of 1-5, how confident are you that you will achieve your goal in this course?

What makes you confident or doubtful of your ability to do well in this course?

