A photograph of a modern, light-colored brick building with large glass windows and a prominent circular window. A paved walkway leads to the entrance, where several people are walking. Bare trees are visible on the left, and a grassy area with a path leads towards the building.

# ACADEMIC LIFE SKILLS: SUPPORT STUDENTS FROM ACADEMICS TO ADULTING

October 14, 2021

Amanda J. Norbutus, Ph.D.  
Valencia College  
Orlando, FL

# Student Success is Hindered by Limited Soft Skills

- ▶ Excuses, Excuses, Excuses!
  - ▶ Emails galore – extensions, apologies, bonus requests, etc
- ▶ Poor quality of work
  - ▶ Execution of assignments is tedious or overly onerous to students because they aren't adept at showing work, planning out a plan of attack, or creating outlines and designs that could easily transition into drafts and final products
- ▶ Issues due to lack of Soft Skills
  - ▶ This is not due to missing content knowledge (hard skills), but instead of soft skills that many professors assume students walk into the classroom knowing

Sorry, I can't today.

My sister's friend's mother's  
grandpa's brother's grandson's  
uncle's fish died.  
and yes, it was tragic.

# Student Skillsets have Changed over the Past Decade



- ▶ Students may have had less exposure to actual textbooks in K-12 \*
- ▶ Not required to seek out the information on their own (e.g. how to find and use key terms, how to outline a chapter, how to identify important concepts, take notes, etc)
- ▶ Workload/Due-date Schedule is often hyper-regulated K-12 , so students not given much self-agency as to when to complete tasks on their own timeline. (e.g. end-of-semester projects are frequently difficult for 1<sup>st</sup> and 2<sup>nd</sup> year college students

\*Colloquial evidence from my students

# Soft Skills in the 21<sup>st</sup> Century



- ▶ **Critical Thinking/ Problem-solving**
- ▶ Creativity
- ▶ Collaboration/ Teamwork
- ▶ **Communication (appropriate and timely)**
- ▶ Information Literacy
- ▶ Media Literacy
- ▶ Adaptability
- ▶ Leadership
- ▶ **Initiative**
- ▶ Productivity
- ▶ Social Skills
- ▶ **Accountability**
- ▶ Work Ethic
- ▶ Work Independently
- ▶ **Self-Reflection**
- ▶ Time-Management
- ▶ Integrity

# Goal: Build students' Soft Skills

- ▶ Building and Analyzing Study Habits
- ▶ Planning
- ▶ Communication
- ▶ Perseverance
- ▶ Initiative
- ▶ Decision-Making
- ▶ Self-confidence
- ▶ Agency – “Dog Ate My HW”



# Strategies

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

## 1a. Make Office Hours Count

- ▶ Choose office hours that fit your schedule, but also encompasses the likelihood that your students *can actually attend* them
- ▶ Office hours tend to be well-attended right after class
- ▶ Request students attempt a problem before talking about it in office hours
  - ▶ This guidance helps students know how to make the most out of their time with you.

# 1b. Problem-Solving and Entangled Learning

- ▶ 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

Experimental Determination of the Rate Law

$\text{F}_2(g) + 2\text{ClO}_2(g) \longrightarrow 2\text{FClO}_2(g)$

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

Experiment	$[\text{F}_2] (M)$	$[\text{ClO}_2] (M)$	Initial Rate (M/s)
1	0.10	0.010	$1.2 \times 10^{-3}$
2	[ $\text{F}_2$ ] doubles 0.10	[ $\text{ClO}_2$ ] unchanged 0.040	Rate doubles $4.8 \times 10^{-3}$
3	0.20	0.010	$2.4 \times 10^{-3}$

$\frac{\text{rate}_2}{\text{rate}_1} = \frac{6.0 \times 10^{-3}}{6.0 \times 10^{-3}} = 4$        $\frac{[ClO_2]_2}{[ClO_2]_1} = \frac{0.040 M}{0.010 M} = 4$

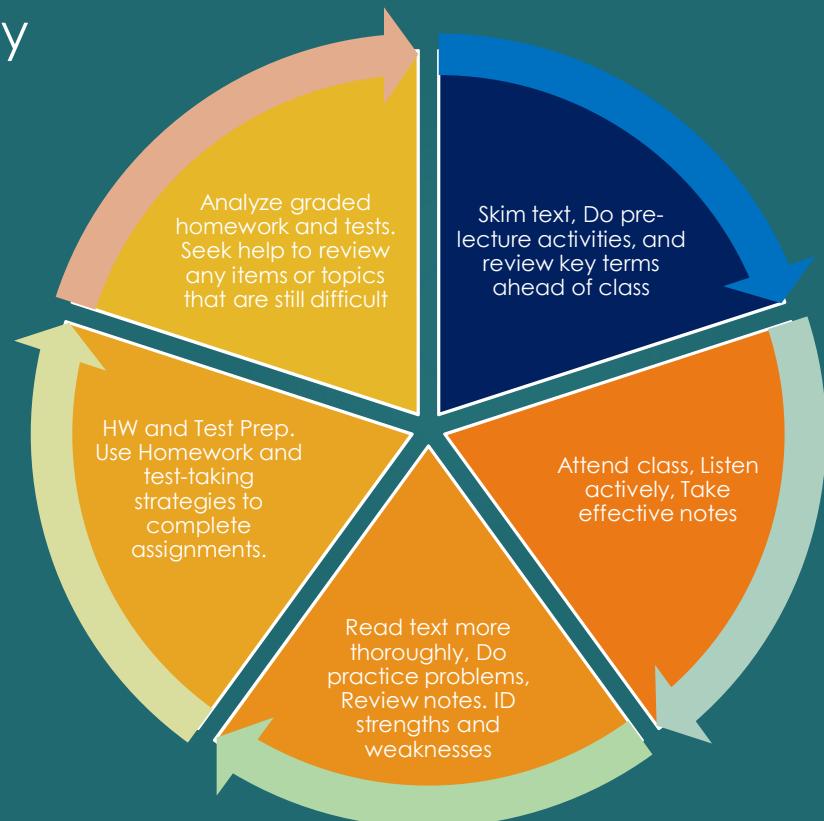
$\text{rate} = k [\text{F}_2][\text{ClO}_2]^y$

$\frac{\text{rate}_2}{\text{rate}_1} = \frac{k [F_2]_2 [ClO_2]^y}{k [F_2]_1 [ClO_2]^y} = \frac{[F_2]_2}{[F_2]_1} = 4$



## 2. 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



## 2b. Study Module

## Study Tips

- [!\[\]\(ef9d0f80c5c0f7b4bed9fcc98d310922\_img.jpg\) General Chemistry - What do you need to know/review to do well in Gen Chem](#)
  - [!\[\]\(999a5e3fc9b7a6ab64b477dbcd2c0571\_img.jpg\) Study Tips for Chemistry](#)
  - [!\[\]\(4a22a098f67aa2577f972ec4d67f1799\_img.jpg\) Science Study Tips 1.8.2021.pdf](#)
  - [!\[\]\(cc98cec0bccb74dd8513e7d4ab71b1e8\_img.jpg\) CHM 1046 - Helpful Info Norbutus.docx](#)
  - [!\[\]\(387c11e31cceec9930b7807a52410275\_img.jpg\) Study Session Sign Up Document](#)

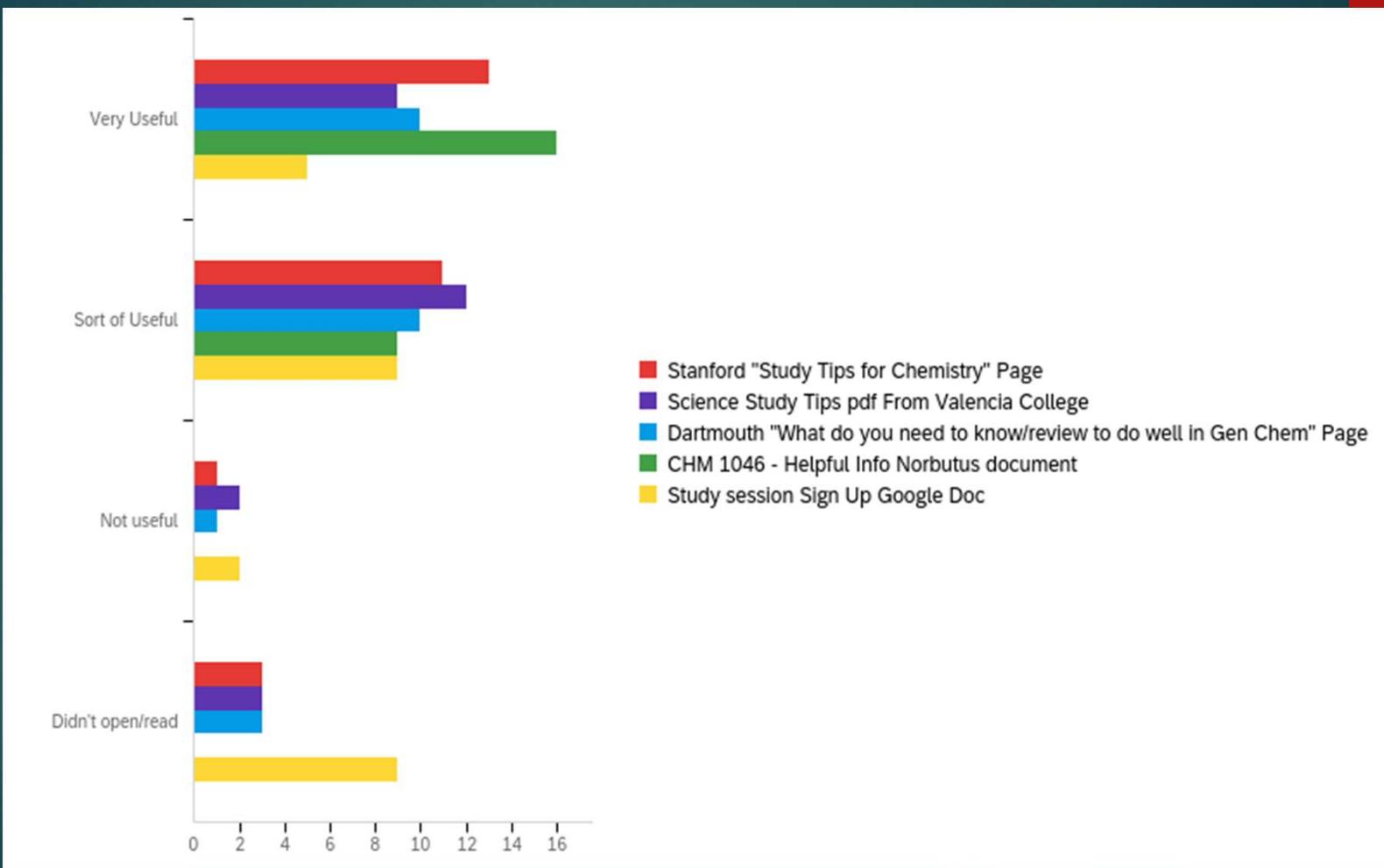


## **Helpful Hints**

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 are... 90% 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 re-read).
  - 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.)

# What Students found useful in my "Study Tips" Module.



# 3. Achieve Innovation Lab: Student Self-Reflection Module

The screenshot shows a list of surveys under the heading "Student Self-Reflection Surveys". The surveys are:

- Achieve - Student Goal Setting and Reflections
- Intro Survey (due Jan 16 | 1 pts)
- Checkpoint Survey 1 (due Jan 30 | 1 pts)
- Checkpoint Survey 2 (due Feb 22 | 1 pts)
- Checkpoint Survey 3 (due Mar 20 | 1 pts)
- Checkpoint Survey 4 (due Apr 10 | 1 pts)

In the surveys, students will:

- ▶ Reflect on how to achieve their goals by the end of the semester
- ▶ Identify their goals
- ▶ Plan how to manage their time
- ▶ Identify the learning strategies they will use
- ▶ Reflect on what strategies/learning styles have worked for them and what have not

## 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**.

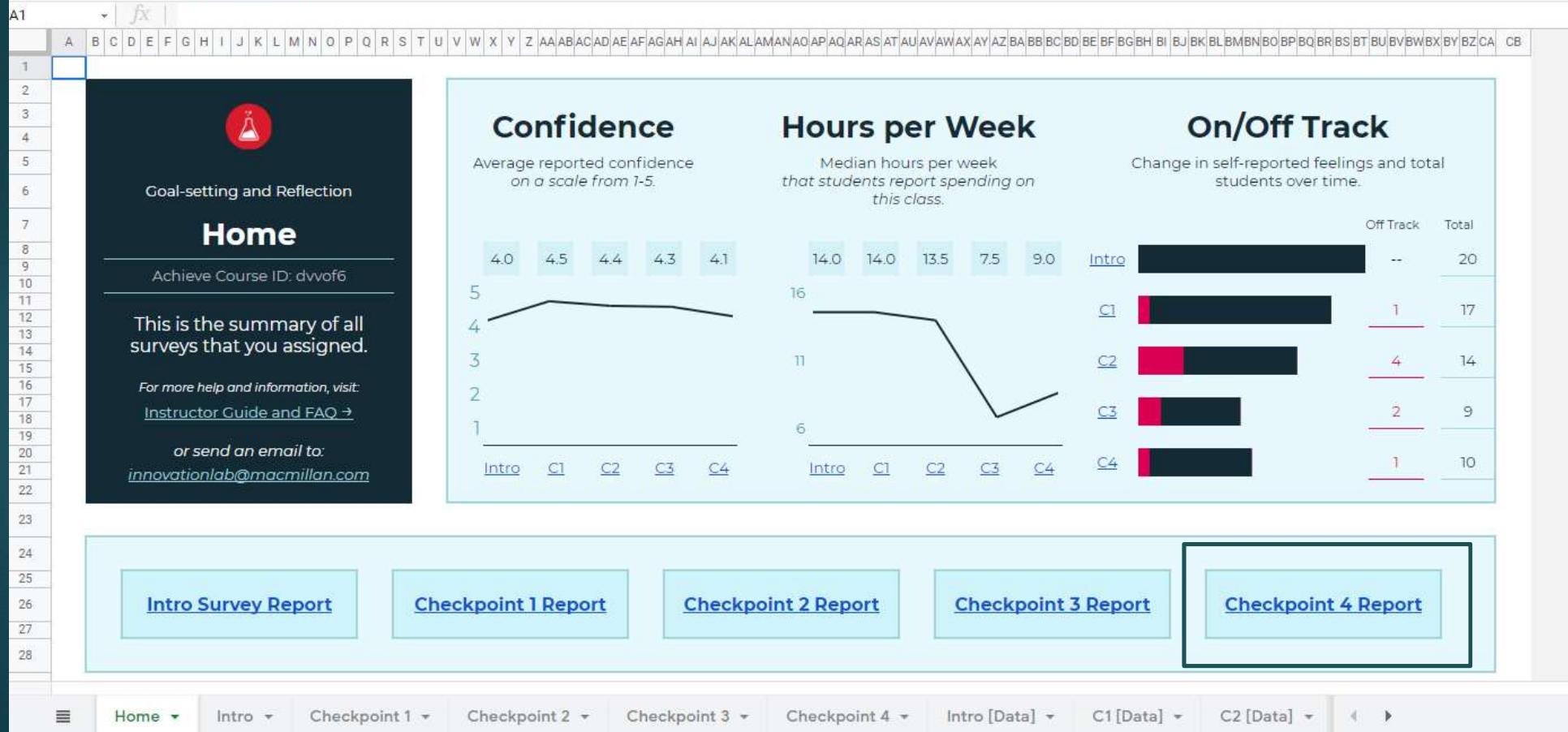
*Choose as many as you like.*

- 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.

## [CHM 1046 Spring 2021-24514: dvvof6] Achieve Goal-setting and Reflection Report

File Edit View Insert Format Data Tools Add-ons Help

View only



# Survey Results –Student Anonymity View

[Back to Summary](#)

On a scale of 1-5, how confident are you that you can either get back or stay on track?

In recent weeks, have you had any challenges in any of the following areas? Check all that apply. If selecting "None of the above" or "Prefer not to answer", make sure it is the only option selected to avoid an incorrect answer.

Please feel free to elaborate on any of the previous challenges.

e152c020-b408  
-11eb-a597-0e0  
a5e1cc163

3

Content-specific challenges (Having difficulty understanding the concepts, not interested in the material, etc.)

n/a

49617e56-b1d2  
-11eb-9092-0e0  
a5e1cc163

4

Life challenges (Family, relationship, extracurriculars, work conflicts, etc.); Health challenges (Physical illness, mental health problems such as anxiety or depression, sleep deprivation, etc.)

I have been diagnosed with anxiety and depression and started taking medication to assist me. It has been hard getting out of bed and wanting to do school work.

a0e2fea2-b281  
-11eb-ad5e-0e0  
a5e1cc163

3

Content-specific challenges (Having difficulty understanding the concepts, not interested in the material, etc.); Academic challenges (Time management, big course load, missed classes, nervousness during testing, don't know how to study, etc.); Environmental distractors (Hard to hear, distracting classmates, family members/housemates, etc.)

I felt like I got distracted very easily, but I also found the material difficult to comprehend

10c4cf88-b14d-  
-11eb-aa6f-0e0a  
5e1cc163

5 - Very confident

None of the above

n/a

5c4af538-31a4-  
-11ea-9f8e-0ae3  
23575bf3

5 - Very confident

None of the above

n/a

# Achieve View – Student Identified

Assessment Score: **100%** [view grading policy](#)

Student Email: [@mail.valenciacollege.edu](#)

student answer assistance ▼

< Question 45 of 46 >

Edit Question Score [My Attempt](#) ▾

How have you grown since the last survey?

*What skills have you developed? What did you learn about yourself?*

I have done practice exams similar to a real exam, so my anxiety will decrease. The practice exams have helped in summarizing the information that we have learned for the chapter.

Instructor Edits X

Comment

Score ⓘ **100%** ▲ ▼

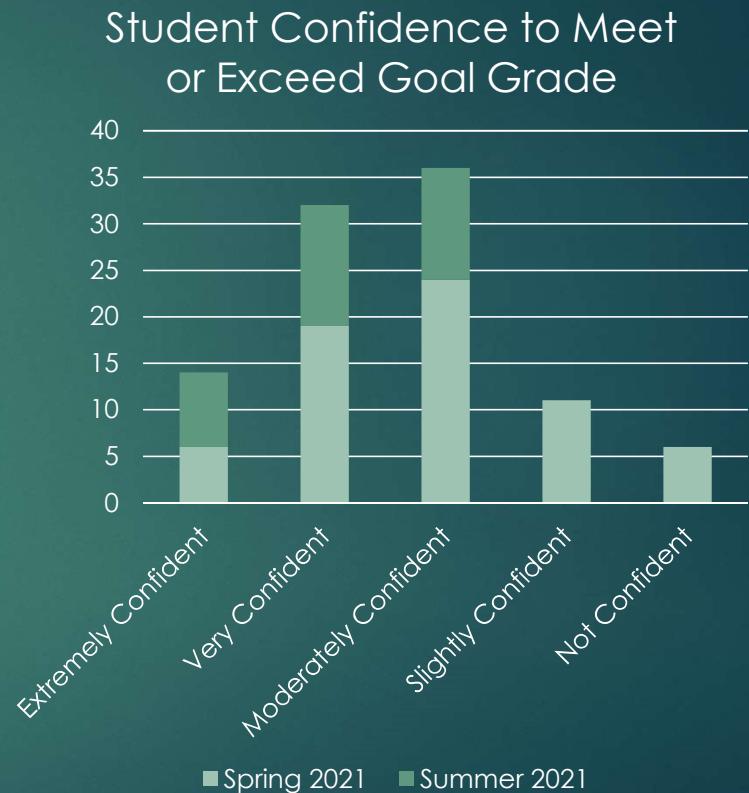
[Mark Incorrect](#)

[Reset Question](#)

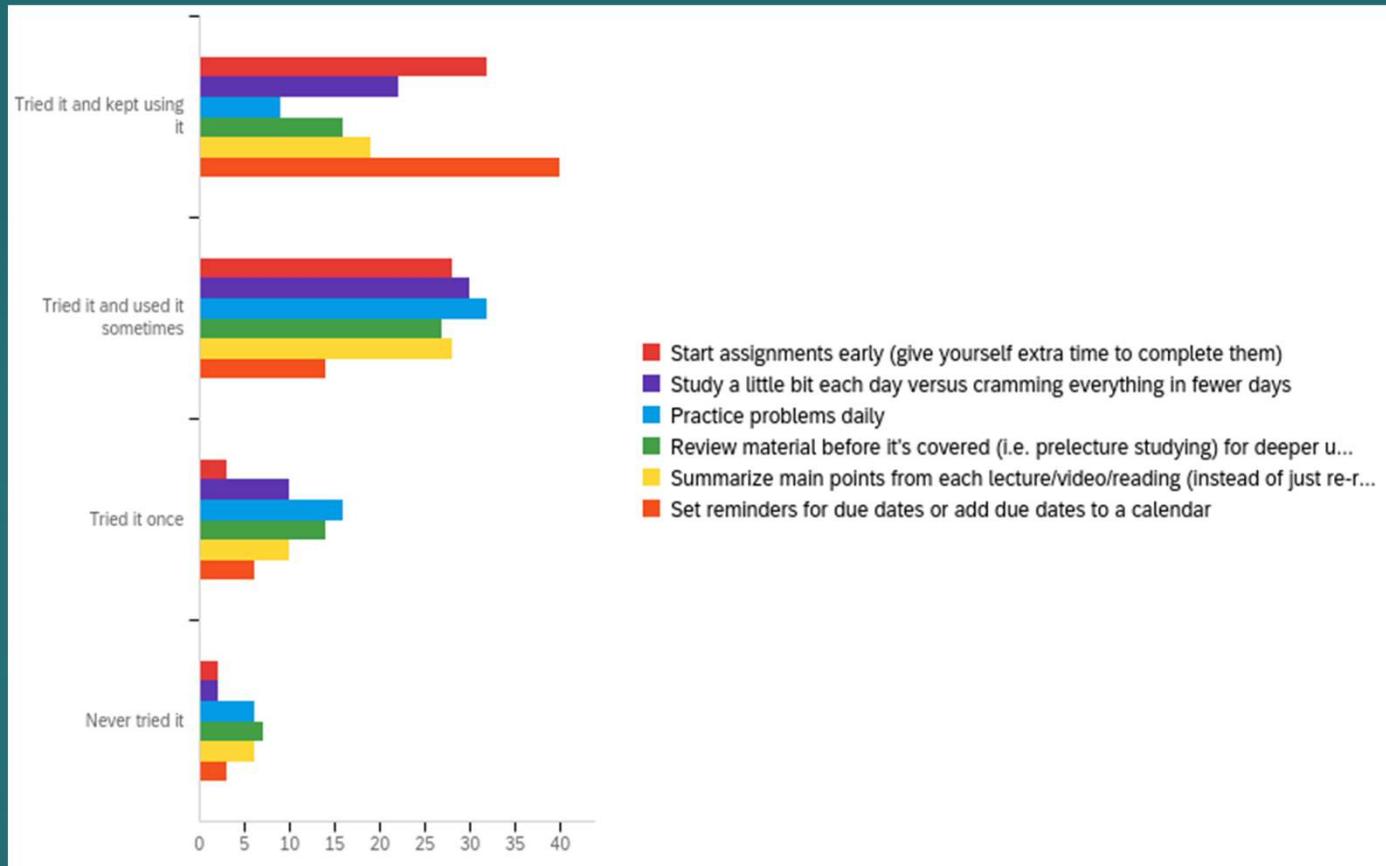
**Save**

### 3. Self-Reflection Surveys

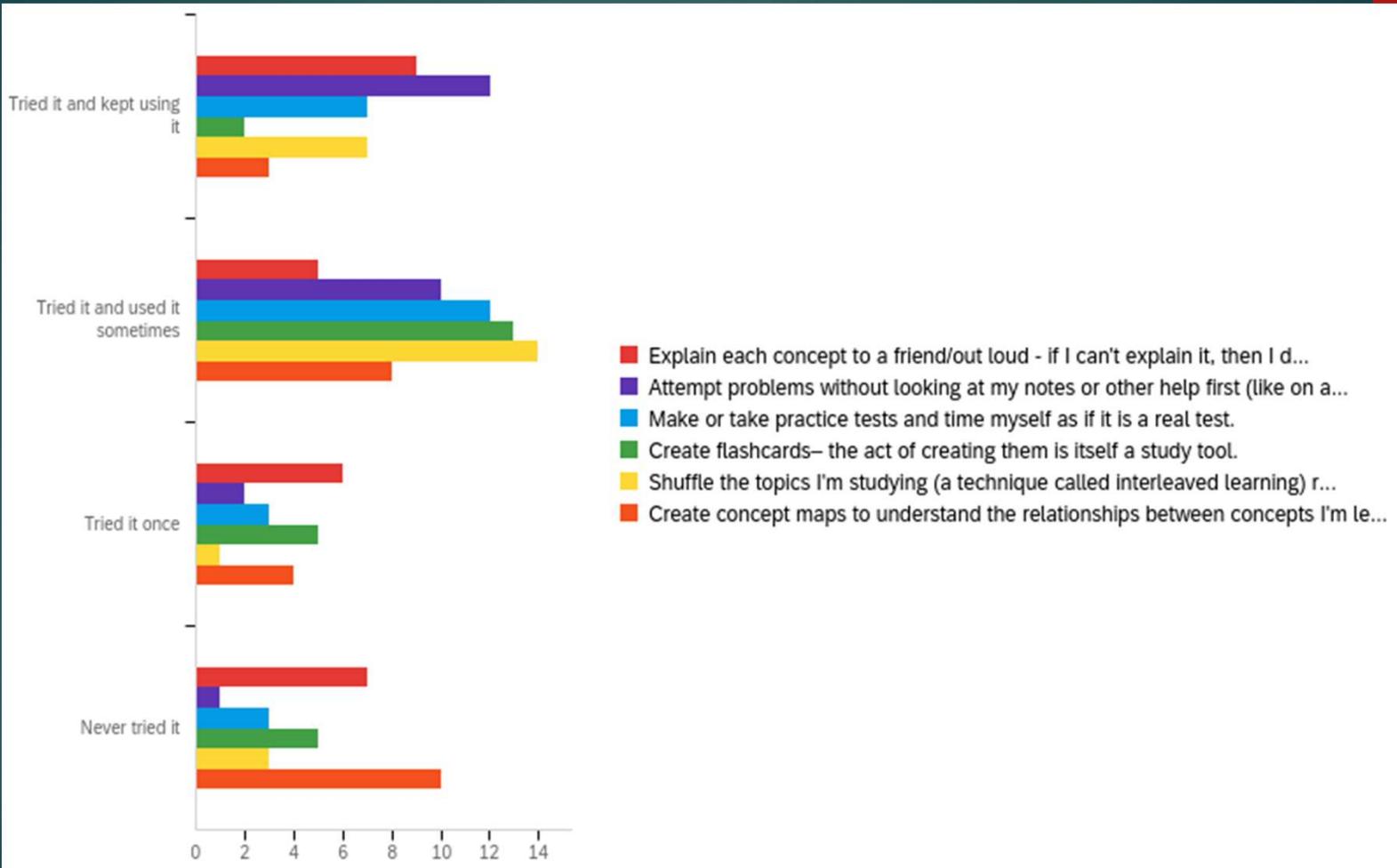
- ▶ Helped Students learn new study habits and modify the ones that did not work for them
- ▶ Helped Students reflect on their chemistry journey to help them optimize their study habits during the semester (compared to latent regret/change after a semester)
- ▶ **94% of students** across 6 sections indicated that they were confident that they would meet or exceed their goals



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

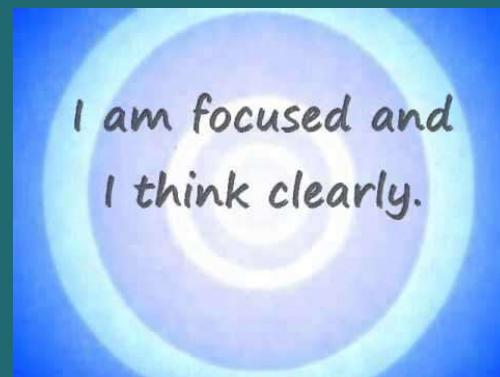


Q: Which of the following "Challenge Yourself" study strategies did you try during the semester.



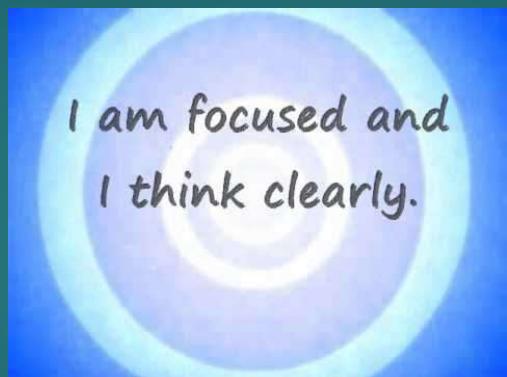
## 4. Academic Affirmations

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

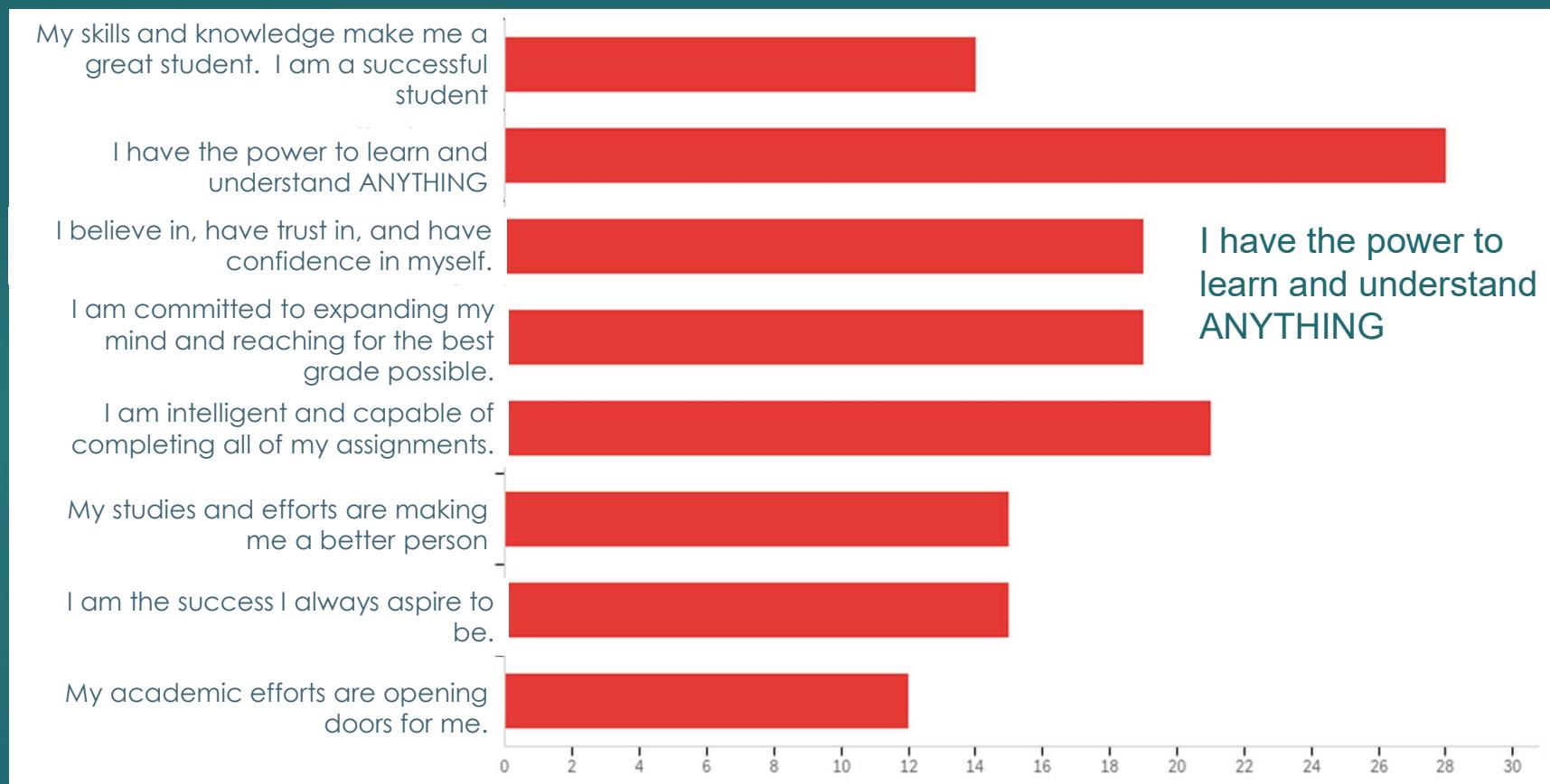


# Academic Affirmations

- ▶ 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?